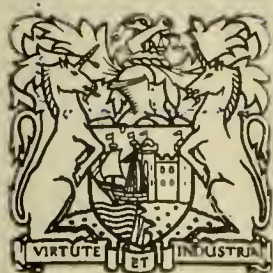


CITY AND COUNTY OF BRISTOL



THE
HEALTH OF BRISTOL
IN
1949



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1.
GENERAL REVIEW
OF THE
HEALTH SERVICES
IN 1949

1. THE HEALTH OF THE CITY AND COUNTY OF BRISTOL

My Lord Mayor, Ladies and Gentlemen,

The year 1949 was a memorable one if only for the fact that it was the first full year of the operation of the National Health Service Act. The fundamental change which has emerged from this new division of responsibilities is that the health department and the Medical Officer of Health are no longer involved in the day-to-day problems of hospital administration and curative medicine. Whether the "separation of powers" is necessarily a good thing is, of course, a question upon which much controversy and argument has been centred. The fact remains that there are many important activities left to the Local Health Authority and their major problem is that of co-ordinating their services with those of the other bodies. The report which I now submit is one which reflects these changes and its pages reveal much interesting data on recent social history and legislation—with particular reference, of course, to the City and County of Bristol.

In the main this report is a collection of reports submitted by the heads of the sections. It is not my intention in my introduction to attempt a detailed survey of the health of the people of Bristol, as a fuller account is contained in the reports mentioned. However, I would like to comment on certain aspects that need emphasis.

Vital Statistics.

The population of the city is still increasing, but the birth-rate shows a further decline from the 1947 post-war peak. The natural increase per 1,000 population was 5·96 in 1949 compared with 7·48 in 1948 and 9·39 in 1947.

The infant mortality rate at 26·0 per 1,000 live births is one of the lowest in the country, as will be clearly seen by reference to the comparative table (pages 18-19) which compares the figures for twenty large towns of England and Wales. Stillbirths at 20 per 1,000 total births is the lowest yet recorded. Maternal mortality continues at a low rate (1·04 per 1,000 total births).

Infectious Disease.

The incidence of infectious disease also compares favourably with that of the remainder of the country.

For three years there have been no deaths from diphtheria and the incidence is at present minute compared with what it was even ten years ago. This is due in no small measure to the success of immunisation campaigns.

I wish to draw particular attention to the incidence of poliomyelitis in the City, to which full reference is made in the body of the report. This prevalence, no doubt, will mean a large number of carriers which in its turn will account for the occurrence of more cases in the City during the next few years. It is important, however, to remember that the fatality of the disease was not high and that the incidence of permanent paralysis in the previous years has not been very great.

Tuberculosis is today the most serious of our infectious diseases—552 new pulmonary cases during the year. In other words, we are allowing three new cases to appear every two days and the number, if anything, is going up. We must find a solution. There were two deaths every three days.

Maternity and Child Welfare.

The evidence of the efficacy of the mother and child health services has already been noted above in the low rates of maternal and infant mortality. I would like to draw attention to the scheme for the care of premature babies, which has been under consideration for two or three years and which is now in operation in this city. This effort should reduce further the infant mortality rate. The scheme is an indication of the ways in which co-operation between the South Western Regional Hospital Board, Southmead Hospital Management Committee and the Bristol Local Health Authority can provide emergency hospital accommodation, domiciliary nursing care and follow-up supervision which can safeguard mother and child and greatly assist the family doctor.

Mental Health.

The occupation and industrial centre at Marlborough House continues to provide day training for defective children and adults who are not capable of receiving education even at special schools or normal industrial training. In July, 1949, a successful camp was held at Brean Down, near Weston-super-Mare, which provided adult males with a holiday, and the female patients under guardianship and licence held their annual holiday at the Free Church Hostel, Weston-super-Mare.

Environmental Health.

Of special note in the work of the Sanitary Inspector's section is the systematic assessment and categorisation of the city's housing, and the methods by which a continuous clean food campaign is being waged among food handlers and housewives. In this last connection the report of the Preventive Medicine Laboratories mentions that "the high incidence of food poisoning and bacterial dysentery this last year is probably not unconnected with the bad hygienic conditions prevailing in cafés, restaurants, and canteens." It is pointed out by Dr. Cooper that regular sampling of crockery, eating utensils, washing-up water, tea cloths, etc., has been carried out in restaurants throughout the year. "Tea cloths used to wipe crockery are one of the biggest sources of danger—direct cultures giving profuse growths of organisms in 35% of samples."

Similarly the routine measures of the City Analyst continue to safeguard the public from adulteration of foodstuffs and to ensure the maintenance of correct standards. Based upon the fieldwork of the sanitary inspector and the laboratory work of the Preventive Medicine Laboratories and the City Analyst, the enforcement of hygienic conditions can be undertaken where the law requires it.

Port Health.

Nine hundred and twenty-four foreign-going vessels with a total tonnage of 4,012,106 entered the port in 1949. There were 38,601

passengers and crew examined, of whom 1,064 were referred to hospital, clinics, or private doctor for treatment or observation.. These figures clearly show the size of the problem of safeguarding the city's health from infection from this source. Similarly, food inspection at the docks is a safeguard which protects not only the city's food but that of other regions as well.

There were 1,000 daily visits by the staff to ships in port and during the year to discover diseases in their early stages. Dr. Richards, chief assistant port medical officer, draws attention to the need for more attention to personal hygiene by members of the ships' crews. Often British ships compare unfavourably with foreign, although one should not generalise. There are still bad examples of crew spaces, although some ships with better spaces have bad crews.

Specialist Officers.

When, in 1948, consideration was given to the re-organisation of the department, it was considered that many duties carried out as routine by the staff might well be transferred to specialist officers who were experts in those fields. Three new appointments were therefore made during 1949 :—

1. Nutritionist—Miss C. M. Wood, M.A.
2. Records Officer—Mr. R. G. Emblem.
3. Personal Assistant to M.O.H.—Mr. D. M. Evans, B.A.

From the brief report by Miss Wood on her duties (page 82), it will be seen that a nutritionist can play a very important part in the work of a health department. Already Miss Wood's efforts in this direction are much appreciated by her colleagues.

The work of the records officer is of great value in organising the mass of statistical and other information on health in such a way as to allow the information to be tabulated and codified with a view to subsequent analysis. As one of the main functions of local health authorities has become the carrying out of medico-social surveys with a view to ascertaining causal factors of diseases and, from the lessons learned, preventive measures can be taken and steps taken to pass the information on to the public in such a way as to influence the public health, it can readily be seen that the function of the records officer is of great importance to that end.

The appointment of a personal assistant to the medical officer of health—which Mr. Evans as a trained teacher aptly fills—is one which includes the co-ordination of health education as an important aspect of his work. It will be appreciated that most of the professional and technical members of the health department staff participate in health education either individually or in groups, and it is important that the work should be co-ordinated and planned on definite lines. Apart from this the personal assistant is required to undertake to edit special reports, assist in health surveys, and act as a liaison officer for the medical officer of health on special duties.

Among the special reports included in this report is one which reviews a survey on "Breast Feeding" by Dr. A. I. Ross, assistant medical officer of health, maternity and child welfare.

School Health.

I have referred to the special matters in the report of the School Medical Officer in a separate introduction to that section of the report.

General.

At the request of the Ministry of Health the City Council granted the Medical Officer of Health four months' leave of absence to join the American Mission to Greece to advise on a national service for the Institute of Insurance in that country. During his absence the work of the department was most efficiently and happily supervised by the Deputy Medical Officer of Health, Dr. R. C. Wofinden. I would like to state here my indebtedness to Dr. Wofinden for his happy and pleasant co-operation and loyalty at all times.

During the year Alderman J. J. Milton, J.P., retired from the services of the City Council, and thereby the Health Committee lost a wise and able chairman. No annual report would be complete without reference to the great work done by this former chairman of the Health Committee. He was elected to the City Council and to the Health Committee in November, 1913, and became Lord Mayor in 1937. He was a member of the first Maternity and Child Welfare Sub-Committee at its inception in 1922 and became its chairman after its third or fourth meeting, which position he held until 1937 when he relinquished it on becoming chairman of the Health Committee. He was an Alderman of the City Council from November, 1929, and he has been a Justice of the Peace since 1921. The pioneer services of Alderman Milton in the development of public health in this City will long be remembered.

During the year Alderman E. T. Cozens died. He had been a member of the Health Committee since 1923, and its vice-chairman since 1945 and was Lord Mayor in 1941. Alderman Cozens was always appreciated as a progressive member of the Committee and was popular with all members of the Department.

The death of Mrs. M. A. Hennessy during the year was another loss to the Health Committee. She had been a member of the Health Committee for many years and was particularly interested in maternity and child welfare work.

To the Town Clerk and all the Chief Officers of the Corporation my best thanks are due for their kind assistance and co-operation at all times. I would like, also, to express my indebtedness to the chief assistant medical officers and my chief administrative assistant, Mr. J. G. Watson, and to all the staff of the Health Department for their loyalty and valuable assistance during the year.

This report has been collated by Mr. D. M. Evans, B.A., assisted by Miss B. Chesham.

Your obedient servant,

R. H. PARRY,

Medical Officer of Health.

Central Health Clinic,
Bristol 2.

2. SUMMARY OF VITAL STATISTICS

Detailed tables covering the vital statistics for the City are included elsewhere in the report, pages 10-21. The figures shown here are based on information supplied by the Registrar-General and excludes deaths and notifications of non-civilians. The estimated population from 1940 onwards is therefore the civilian population only, and the various rates calculated on this basis are in consequence slightly overstated, whilst the rates for 1943 to 1945 are also subject to some further adjustment consequent on the correction of the Registrar-General's estimate of population of these years, particulars of which were given in my report for the year 1946.

	1949
Estimated civilian population (mid-year) ...	439,740
Marriages	3,783
(Rate per 1,000 population)	17.21
Births	7,506
(Rate per 1,000 total population)	17.07
Stillbirths	157
(Rate per 1,000 total births)	20.48
Deaths	4,884
(Rate per 1,000 population (crude)	11.11
(do. (adjusted)	10.88
(Area comparability factor)	0.98
Natural Increase per 1,000 population	5.96
Deaths under one year	192
(Rate per 1,000 live births)	26
Deaths under one month	133
(Rate per 1,000 live births)	17.7
Deaths from puerperal causes	8
(Rate per 1,000 total births)	1.04

Matters of particular interest in the statistics, referred to in greater detail below, are:—

Decline of birth-rate.

Illegitimacy—decreasing.

The stillbirth rate is a low record.

Deaths—reintroduction of area comparability factors.

Population.

The Registrar-General estimates the civilian population of the City at mid-1949 as 439,740, an increase of 4,740 on the figure supplied for mid-1948. Calculations of rates, where appropriate, have been based upon this figure.

Marriages (Rate: 17.21 per 1,000 population).

	per 1,000 population.
1949	3,783 17.21
1948	3,786 17.41
1947	4,033 18.82

Births (Rate: 17.07 per 1,000 population).

Births	Y E A R			
	1946	1947	1948	1949
Total registered live births	8,929	10,082	8,485	8,326
1949 compared with other years (+ or -)	-603	-1,756	-159	
Non-resident births in Bristol	1,105	1,026	889	1,005
Births—Bristol residents only	7,824	9,056	7,596	7,321
Births to Bristol residents outside City boundary	217	87	235	185
Registered live births—R.G.'s corrected figure for Bristol	8,041	9,143	7,831	7,506
Birth-rate per 1,000 population ...	19.28	21.33	18.00	17.07

From the table it will be seen that the birth-rate (17.07 per 1,000 population), continues to decline from its post-war peak but, as shown above, the rate is still greater than the death-rate (crude rate 11.11 per 1,000 population)—the natural increase was 5.96 per 1,000 population.

Illegitimacy (Rate: 50 per 1,000 live births).

	1948	1949
Total illegitimate live births	465	418
% of total live births	5½%	5%
Non-resident illegitimate births in Bristol	75	75
Non-resident % of illegitimate births ...	16%	18%
Registrar-General's corrected total illegitimate live births—Bristol ...	429	379

The decline from the 1945 peak of 711 illegitimate births or nearly 10% of that year's total live births, has continued. The corrected figures, which take account of inward and outward transfers, provided by the Registrar-General, were 379 compared with 429 in 1948.

Stillbirths (Registrar-General's corrected number 157. Rate per 1,000 total births, 20.48).

The stillbirth rate for 1949 at 20.48 per 1,000 total births established a new low level record—improving on the 21.8 per 1,000 total births which was in itself a new record.

There were 208 stillbirths registered in 1949 compared with 215 in 1948. Of these, 52 (43 in 1948) were outside-city cases. One case only was transferable to Bristol from outside the City boundary (3 in 1948).

Deaths (Rate : (Crude) 11.11 per 1,000 population).
 (Adjusted) 10.88 " " "
 (Area comparability factor 0.98).

	1948	1949	Increase or decrease on previous year	Rate per 1,000 population, 1949
Total number of civilian deaths in City ...	4,975	5,342	+367	11.11 (crude)
Total deaths non-Bristol residents ...	548	676	+128	
Total deaths Bristol residents only ...	4,576	4,884	+308	10.88 (adjusted)

The adjusted death-rate of 10.88 per 1,000 population compares favourably with the low rate record established in 1948 of 10.52 per 1,000 population.

Natural increase (Rate: 5.96 per 1,000 population).

The natural increase in the population of Bristol, that is, the excess of births over deaths during the year was 2,622 (3,255 in 1948).

Infant Mortality (Total 192) (Rate: 26 per 1,000 live births).

During 1949, 260 infants (including 72 non-Bristol) died within one year of birth—17 more than in the previous year when there were 243 (including 54 non-Bristol). After correction for transfers the Registrar-General's figure is the same for both years—192. The infant mortality rate for 1949 at 25.58 compares favourably with the low record rate of 1948 (24.51).

	1949	1948	1947
Legitimate infant mortality rate per 1,000 legitimate births	25	24	29
Illegitimate infant mortality rate per 1,000 illegitimate births	34	33	25

The greater mortality of illegitimate infants (compared with legitimate infants), always in evidence in previous years, was reversed in 1947, but in 1948 and 1949 the tendency has re-asserted itself.

Neo-natal deaths (133) (Rate: 17.22 per 1,000 live births).

The Registrar-General's figures for this age group are not available, but local figures show that the number of babies dying in Bristol during the first month of life was 179 (152 in 1948). After correction for residence at time of death, this figure becomes 133 (119 in 1948). This age group represents 69% of the number of infants under one year of age (62% in 1948).

In 1949 (uncorrected for transfers), of the total neo-natal deaths 65 (36% approx.) occurred on the first day of life and from one day to within the first week 71 (40% approx.). In 1948 these figures were respectively 36% and 39%. In 1949, after correction for transfers, there were 50 neo-natal deaths on first day and 53 in the one day to one week group.

Maternal mortality (8) (Rate: 1.04 per 1,000 total births).

There were eleven maternal deaths in the City during 1949. Of these, eight were Bristol residents.

During 1948, the lowest number of cases ever in Bristol, a total of 10 and a net figure of 6, were recorded and the resulting low record of 0.74 per 1,000 total births was established. The rate—1.04 of 1949—is the second lowest figure yet reached.

VITAL STATISTICS.

Table 1.—*Supplied by the Registrar General.*Population, marriages, births, deaths, natural increase, infant mortality, for
Calendar Year 1949 and previous seven years—Bristol.

	1949	1948	1947	1946	1945	1944	1943	1942
Estimated civilian population (mid year)	439,740	435,000	428,600	417,090	414,320	405,530	370,800	362,200
Marriages.								
Number	3,783	3,786	4,033	3,818	3,919	3,071	3,123	4,131
Rate per 1,000 population ...	17.21	17.41	18.82	18.31	18.92	15.15	16.8	22.8
Births.								
Legitimate—males	3,687	3,730	4,130	3,913	3,352	3,726	3,369	3,164
females	3,440	3,672	4,239	3,621	3,078	3,492	3,082	2,956
Illegitimate—males	204	225	241	255	301	290	214	158
females	175	204	232	252	296	259	220	144
Total	7,506	7,831	9,142	8,041	7,027	7,767	6,885	6,422
Rate per 1,000 population ...	17.07	18.00	21.33	19.28	16.96	19.15	18.57	17.73
Stillbirths.								
Legitimate—males	77	75	100	117	78	115	101	123
females	72	89	94	86	81	85	97	96
Illegitimate—males	3	4	11	8	9	15	5	8
females	5	7	4	6	9	3	6	3
Total	157	175	209	217	177	218	209	230
Rate per 1,000 total births ...	20	22	22	26	25	27	29	34
Deaths.								
Males	2,481	2,308	2,563	2,424	2,387	2,308	2,327	2,203
Females	2,403	2,268	2,551	2,473	2,418	2,149	2,271	2,162
Total	4,884	4,576	5,114	4,897	4,805	4,457	4,598	4,365
Rate per 1,000 population ...	11.11	10.52	11.93	11.75	11.60	10.99	12.40	12.05
Natural increase per 1,000 popu- lation	5.96	7.48	9.39	7.54	5.36	8.16	6.17	5.68
Deaths under 1 year.								
Legitimate	179	178	255	273	208	244	290	221
Rate per 1,000 legit. live births	25	24	29	36	32	34	45	36
Illegitimate	13	14	12	26	37	24	23	14
Rate per 1,000 live births ...	34	33	25	51	62	44	53	46
Total deaths	192	192	267	299	245	268	313	235
Rate per 1,000 births	26	25	29	37	35	35	45	37
Deaths under 1 month.								
Total deaths	133	119	160	192	140	143	191	167
Rate per 1,000 live births ...	18	15	18	24	20	18	28	24
Diarrhoea and enteritis— (under two years)								
Deaths	5	3	16	25	22	33	31	8
Rate per 1,000 live births ...	0.66	0.38	1.7	3.1	3.1	4.2	4.5	1.25
Maternal mortality.								
Deaths from puerperal sepsis...	2	3	2	2	3	3	2	2
Rate per 1,000 total births ...	0.26	0.37	0.21	0.24	0.42	0.37	0.28	0.30
Deaths from other puerperal causes	6	3	9	16	6	7	8	11
Rate per 1,000 total births ...	0.78	0.37	0.96	1.94	0.83	.88	1.13	1.80
Total deaths from puerperal causes	8	6	11	18	9	10	10	13
Rate per 1,000 total births ...	1.04	0.74	1.17	2.18	1.25	1.25	1.41	2.10

Table 2.—*Supplied by the Registrar General.*

Birth-rates, death-rates, infant mortality, maternal mortality and case-rates for certain infectious diseases in the year 1949.

(Provisional figures based on Quarterly Returns).

	Bristol	England and Wales	126 County Boroughs and great towns including London	148 Smaller towns (resident populations 25,000 to 50,000 at 1931 Census)	London Administrative County
*Rates per 1,000 civilian population.					
BIRTHS :					
Live	17.07	16.7 (A)	18.7	18.0	18.5
Still	0.36	0.39 (A)	0.47	0.40	0.37
DEATHS :					
(Adjusted)	10.88				
All cases	11.11	11.7 (A)	12.5	11.6	12.2
Typhoid and paratyphoid fevers ...	0.00	0.00	0.00	0.00	0.00
Whooping cough ...	0.01	0.01	0.02	0.01	0.01
Diphtheria	—	0.00	0.00	0.00	0.00
Tuberculosis	0.49	0.45	0.52	0.42	0.52
Influenza	0.14	0.15	0.15	0.14	0.11
Smallpox	—	0.00	0.00	—	—
Acute poliomyelitis and polioencephalitis	0.01	0.01	0.02	0.02	0.01
Pneumonia	0.48	0.51	0.56	0.49	0.59
NOTIFICATIONS :					
Typhoid fever ...	0.02	0.01	0.01	0.01	0.01
Paratyphoid fever ...	0.00	0.01	0.02	0.01	0.01
Cerebro-spinal fever ...	0.03	0.02	0.03	0.02	0.02
Scarlet fever	1.78	1.63	1.72	1.83	1.46
Whooping cough ...	0.84	2.39	2.44	2.39	1.70
Diphtheria	0.01	0.04	0.05	0.04	0.07
Erysipelas	0.31	0.19	0.20	0.19	0.17
Smallpox	—	0.00	0.00	0.00	0.00
Measles	8.41	8.95	8.91	9.18	8.54
Pneumonia	1.02	0.80	0.91	0.65	0.55
Acute poliomyelitis ...	0.296	0.13	0.13	0.12	0.18
Acute polioencephalitis	0.01	0.01	0.01	0.02	0.01
Food poisoning ...	0.22	0.14	0.16	0.14	0.19
Rates per 1,000 live births.					
Deaths under 1 year of age	26	32 (b)	37	30	29
Deaths from diarrhoea and enteritis under 2 years of age ...	0.67	3.0	3.8	2.4	1.7
MATERNAL MORTALITY :					
Puerperal sepsis ...	0.27				
Other maternal causes	0.80				
Total	1.07				
Rate per 1,000 total births (i.e., live and still).					
MATERNAL MORTALITY :					
Puerperal sepsis ...	0.26	0.22			
Other maternal causes	0.78	0.76			
Total	1.04	0.98			
NOTIFICATIONS :					
Puerperal fever ...}	17.88	6.31	8.14	5.30	6.82
Puerperal pyrexia ...}					

Abortion :—Mortality per million women aged 15-44 in England and Wales

with sepsis ... 8
without sepsis ... 4

* A dash (—) signifies that there were no deaths.

(A) = Rates per 1,000 TOTAL population.

(B) = Per 1,000 related births.

Table 3.

Compiled from figures supplied by Registrar General.

Total deaths by cause and age during the calendar year 1949—Bristol.

CAUSES OF DEATH	Sex	All Ages	0—1	1—5	5—15	15—45	45—65	65+
ALL CAUSES	M.	2,481	107	31	16	193	653	1,481
	F.	2,403	85	17	12	171	458	1,660
1. Typhoid & paratyphoid fevers	M.	1	—	—	—	1	—	—
	F.	—	—	—	—	—	—	—
2. Cerebro-spinal fever ...	M.	1	1	—	—	—	—	—
	F.	—	—	—	—	—	—	—
3. Scarlet fever	M.	—	—	—	—	—	—	—
	F.	—	—	—	—	—	—	—
4. Whooping cough	M.	—	—	—	—	—	—	—
	F.	2	2	—	—	—	—	—
5. Diphtheria	M.	—	—	—	—	—	—	—
	F.	—	—	—	—	—	—	—
6. Tuberculosis of respiratory system	M.	108	—	1	—	43	52	12
	F.	86	1	2	1	59	17	6
7. Other forms of Tuberculosis	M.	15	—	2	4	3	5	1
	F.	8	—	1	3	2	1	1
8. Syphilitic disease	M.	16	—	—	—	—	7	9
	F.	4	—	—	—	—	2	2
9. Influenza	M.	31	—	—	1	3	8	19
	F.	30	—	—	—	4	6	20
10. Measles	M.	4	—	4	—	—	—	—
	F.	—	—	—	—	—	—	—
11. Acute poliomyelitis & poli-encephalitis	M.	4	1	1	—	2	—	—
	F.	1	—	—	—	1	—	—
12. Acute infectious encephalitis	M.	3	—	—	—	2	1	—
	F.	3	1	—	—	—	2	—
13. Cancer of buccal cavity and œsophagus	M.	40	—	—	—	1	10	29
	F.	32	—	—	—	3	15	14
13. Cancer of uterus	M.	83	—	—	—	3	36	44
14. Cancer of stomach and duodenum	F.	77	—	—	—	1	25	51
15. Cancer of breast	M.	2	—	—	—	1	—	1
	F.	80	—	—	—	11	38	31
16. Cancer of all other sites ...	M.	306	—	—	1	20	104	181
	F.	203	—	—	1	9	79	114
17. Diabetes	M.	11	—	—	—	1	2	8
	F.	26	—	—	—	1	5	20
18. Intra-cranial vascular lesions	M.	217	—	—	—	3	31	183
	F.	354	—	—	—	3	70	281
19. Heart disease	M.	812	—	—	1	24	187	600
	F.	828	—	—	—	22	91	715
20. Other diseases of circulatory system	M.	64	—	—	—	3	19	42
	F.	88	1	—	—	2	10	75
21. Bronchitis	M.	143	1	—	—	8	51	83
	F.	98	2	—	—	2	13	81
22. Pneumonia	M.	115	24	5	1	6	32	47
	F.	96	12	3	2	5	5	59
23. Other respiratory diseases ...	M.	35	—	1	—	4	15	15
	F.	22	—	2	—	4	5	11
24. Ulceration of stomach and duodenum	M.	34	—	—	—	6	14	14
	F.	10	—	—	—	—	1	9
25. Diarrhœa (under 2 years of age)	M.	3	3	—	—	—	—	—
	F.	2	2	—	—	—	—	—
26. Appendicitis	M.	7	—	—	—	2	3	2
	F.	5	—	2	1	2	—	—
27. Other digestive diseases ...	M.	30	1	4	—	2	7	16
	F.	42	—	—	—	6	9	27
28. Nephritis	M.	53	1	1	—	6	11	34
	F.	47	—	—	—	5	14	28
29. Puerperal and post-abortive sepsis	F.	2	—	—	—	2	—	—
30. Other maternal causes ...	F.	6	—	—	—	6	—	—
31. Premature birth	M.	18	18	—	—	—	—	—
	F.	10	10	—	—	—	—	—
32. Congenital malformations, birth injury, infantile disease	M.	63	55	1	—	3	4	—
	F.	57	50	—	1	2	2	2
33. Suicide	M.	25	—	—	—	3	14	8
	F.	15	—	—	—	4	8	3
34. Road traffic accidents ...	M.	30	—	2	3	12	6	7
	F.	11	—	1	1	3	2	4
35. Other violent causes ...	M.	44	—	1	2	14	8	19
	F.	35	1	1	—	—	2	31
36. All other causes	M.	163	2	8	3	17	26	107
	F.	123	3	5	2	12	26	75

Table 4.

*Compiled from figures supplied by Registrar General.***Principal causes of death during calendar year 1949—Bristol.**

Death Rate per 1,000	DISEASE	Net deaths in 1949	% to total deaths
.002	Typhoid and paratyphoid fevers	1	.02
.002	Cerebro-spinal fever	1	.02
—	Scarlet fever	—	—
.004	Whooping cough	2	.04
—	Diphtheria	—	—
.441	Tuberculosis of respiratory system	194	3.97
.052	Other forms of tuberculosis	23	.47
.046	Syphilitic disease	20	.41
.139	Influenza	61	1.25
.009	Measles	4	.08
.011	Acute poliomyelitis and polio-encephalitis	5	.10
.014	Acute infectious encephalitis	6	.13
.091	Cancer of buccal cavity and oesophagus	40	.82
.073	Cancer of uterus	32	.65
.364	Cancer of stomach and duodenum	160	3.27
.187	Cancer of breast	82	1.66
1.157	Cancer of all other sites	509	10.42
.084	Diabetes	37	.76
1.298	Intra cranial vascular lesions	571	11.69
3.729	Heart disease	1,640	33.58
.346	Other diseases of circulatory system	152	3.11
.548	Bronchitis	241	4.93
.480	Pneumonia	211	4.32
.130	Other respiratory diseases	57	1.17
.100	Ulceration of stomach and duodenum	44	.90
.011	Diarrhoea	5	.10
.027	Appendicitis	12	.25
.164	Other digestive diseases	72	1.49
.227	Nephritis	100	2.05
.004	Puerperal and post-abortion sepsis	2	.04
.014	Other maternal causes	6	.13
.064	Premature birth	28	.57
	Congenital malformations, birth injury, in- fantile disease	120	2.46
.273	Suicide	40	.82
.093	Road traffic accidents	41	.84
.180	Other violent causes	79	1.62
.650	All other causes	286	5.86
11.105	ALL CAUSES	4,884	

Table 6.

Notifiable Cases during 1949 (including Port cases). Local Figures.

NOTIFIABLE DISEASES.	NOTIFICATIONS.							REMOVED TO HOSPITAL		Notified in each quarter.				Attack rate per 1,000 Population	DEATHS (Corrected for transfers.)						
	At all ages	At ages—years :						No.	%	1st	2nd	3rd	4th		All ages	Under 1	1 to 5	5 to 15	15 to 45	45 to 65	65 and upwards
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65															65 and upwards
Diphtheria ...	4	—	—	3	—	1	—	4	100	1	1	1	1	—	—	—	—	—	—	—	—
Erysipelas ...	135	—	5	4	11	33	54	71	53	42	33	27	33	—	—	—	—	—	—	—	
Scarlet fever ...	786	2	252	494	22	15	1	563	72	131	162	138	355	—	—	—	—	—	—	—	
Typhoid fever ...	7	—	—	1	1	3	1	7	100	—	—	1	6	—	—	—	—	1	—	—	
Para-typhoid ...	2	—	1	—	1	—	—	2	100	—	—	1	—	—	—	—	—	—	—	—	
Cerebro-spinal meningitis	12	—	4	4	—	3	1	12	100	3	5	1	3	—	1	—	—	—	—	—	
Poliomyelitis ...	131	7	50	43	18	13	—	118	90	5	1	63	62	—	5	1	1	3	—	—	
Pneumonia ...	447	18	57	50	21	113	90	141	32	232	87	40	88	—	211	36	8	3	11	47	
Malaria ...	7	—	—	—	—	5	2	4	57	1	2	1	3	—	—	—	—	—	—	—	
Dysentery ...	48	—	26	14	1	6	1	13	27	3	—	3	42	—	—	—	—	—	—	—	
Encephalitis lethargica ...	1	1	—	—	—	—	—	1	100	—	—	1	—	—	6	1	—	2	3	—	
Polio-encephalitis	4	—	2	1	1	—	—	2	50	—	1	2	4	—	—	—	—	—	—	—	
Puerperal pyrexia	137	—	—	—	54	83	—	5	4	51	39	29	18	—	2	—	—	2	—	—	
Ophthalmia neonatorum	9	9	—	—	—	—	—	—	—	3	3	1	2	—	—	—	—	—	—	—	
Measles ...	3700	136	2201	1313	45	5	—	103	3	2960	447	263	30	—	4	—	—	—	—	—	
Whooping cough	369	31	228	105	1	2	1	42	11	69	128	63	109	—	2	2	—	—	—	—	
Acute rheumatism	59	—	5	52	2	—	—	2	3	22	10	15	12	—	—	—	—	—	—	—	
Food poisoning ...	96	1	9	11	6	26	22	4	4	2	12	41	41	—	—	—	—	—	—	—	

Table 5.

Table showing population, birth-rates, death-rates, zymotic death-rates, infant and maternal mortality rates of the 20 large towns of England and Wales for 1949.

	Birmingham	Bradford	Bristol	Cardiff	Coventry	Croydon	Kingston upon Hull	Leeds	Leicester	Liverpool	Manchester	Newcastle upon Tyne	Nottingham	Plymouth	Portsmouth	Salford	Sheffield	Southampton	Stoke-on-Trent	Sunderland
POPULATION—Civilian ...	1,106,800	291,600	439,740	243,300	254,400	249,740	296,400	504,900	283,400	800,800	699,600	294,540	300,640	190,860	218,250	178,900	513,700	180,330	274,500	181,340
Total	1,107,200	291,600	439,840	243,500	254,900	250,040	296,600	505,400	283,400	802,000	700,700	295,240	301,240	206,960	240,550	178,900	513,800	180,930	274,500	181,340
COMPARABILITY FACTOR ...	1.13	0.98	0.98	1.07	1.27	0.94	1.15	1.08	1.02	1.20	1.12	1.10	1.09	0.99	0.97	1.15	1.08	1.03	1.22	1.14
RATES PER 1,000 POPULATION																				
Birth	18.1	17.3	17.07	19.56	18.6	16.1	20.95	16.7	17.91	20.7	18.77	18.27	18.96	19.75	19.06	20.3	15.7	18.79	18.7	19.9
Crude Death	10.7	14.5	11.11	11.44	9.4	10.95	12.1	12.8	11.55	11.6	12.91	12.76	11.8	13.14	12.05	13.0	12.5	11.65	11.5	13.1
Adjusted Death	12.1	14.2	10.88	12.24	11.9	10.29	13.97	13.8	11.78	13.9	14.46	14.04	12.86	13.01	11.69	14.95	13.5	11.99	15.13	14.9
Typhoid and Paratyphoid Fever	0.00	0.00	0.002	0.004	0.00	—	0.00	—	—	0.004	—	0.00	—	—	—	—	—	—	0.00	—
Cerebro-spinal Fever ...	0.01	0.01	0.002	0.004	0.012	—	0.00	0.002	0.004	0.019	0.01	0.01	0.01	0.01	0.01	0.001	0.006	—	0.015	0.04
Scarlet Fever	—	0.003	—	—	0.00	—	0.00	0.002	—	—	—	0.00	—	—	—	—	0.002	—	0.00	—
Whooping Cough	0.02	0.003	0.005	0.016	0.008	0.008	0.02	0.01	0.018	0.071	0.04	0.01	0.0	0.03	0.00	0.006	0.008	0.03	0.007	0.04
Diphtheria	0.00	0.006	—	—	0.008	0.004	—	—	—	0.005	—	0.00	—	0.00	0.00	0.001	—	—	0.004	0.01
Influenza	0.19	0.26	0.14	0.069	0.12	0.132	0.08	0.15	0.056	0.127	0.15	0.075	0.09	0.05	0.04	0.20	0.199	0.1	0.236	0.15
Measles	0.01	0.01	0.009	0.004	0.004	0.004	—	0.01	0.004	0.015	0.01	0.00	0.01	0.00	0.02	—	0.004	0.01	0.004	—
Acute polio-myelitis and encephalitis	0.01	0.024	0.011	0.016	0.00	0.008	0.00	0.02	0.011	0.005	0.01	0.00	0.009	0.01	0.00	0.001	0.029	0.03	0.007	—
Acute infectious encephalitis	0.00	0.003	0.014	0.012	0.00	0.004	0.00	0.01	0.014	—	0.01	0.03	—	0.01	0.00	0.001	0.019	—	0.007	0.03
Smallpox	—	0.00	—	—	0.00	—	—	—	—	—	—	0.00	—	0.00	—	—	—	—	0.00	—
Diarrhoea (under 2 yrs.)	0.06	0.058	0.011	0.069	0.082	0.028	0.11	0.03	0.021	0.119	0.09	0.105	0.12	0.07	0.04	0.020	0.056	0.07	0.047	0.15
Tuberculosis—Pulmonary	0.54	0.40	0.44	0.64	0.50	0.352	0.62	0.48	0.50	0.677	0.60	0.764	0.625	0.62	0.45	0.6	0.440	0.43	0.566	0.68
Other forms	0.05	0.07	0.05	0.04	0.10	0.024	0.05	0.06	0.078	0.085	0.05	0.068	0.043	0.03	0.04	0.12	0.074	0.04	0.043	0.10
Cancer	1.75	1.95	1.87	1.93	1.44	1.862	1.84	1.99	1.80	1.726	2.00	1.929	1.73	1.98	2.16	1.9	1.993	1.91	1.932	1.77
INFANTILE MORTALITY RATE (per 1,000 live births) ...	31.0	37.0	26.0	31.0	39.4	29.0	42.0	30.0	23.83	44.0	38.24	39.61	38.0	34.23	24.04	53.0	35.0	37.66	34.0	57.0
MATERNAL MORTALITY RATE (per 1,000 total births)—																				
Sepsis	0.05	0.19	0.26	0.61	0.00	0.24	—	0.12	0.58	0.237	0.45	0.365	0.17	—	0.23	—	—	0.59	0.378	—
Other Causes	0.44	1.15	0.78	1.22	0.8	0.98	1.26	0.93	0.96	0.295	0.74	1.095	0.34	1.54	0.71	—	0.60	0.88	1.136	1.61
Total	0.49	1.34	1.04	1.83	0.8	1.22	1.26	1.04	1.54	0.532	1.19	1.460	0.51	1.54	0.94	—	*0.60	1.47	1.514	1.61

* excluding Abortion.

Table 7.
Tuberculosis (including Port cases) Local Figures.

CASES.																DEATHS. (Corrected for transfers.)														
	At all ages	Under 1	1-	5-	10-	15-	20-	25-	35-	45-	55-	65+	Quarters				Case rate per 1,000 Popu ⁿ	At all ages	Under 1	1-	5-	10-	15-	20-	25-	35-45-	55-	65+	Death rate	
													1st	2nd	3rd	4th														
Pulmonary tuberculosis Cases notified	477	1	9	16	15	68	78	109	70	56	37	18	147	115	116	99	1.255	194	1	3	—	1	8	19	37	38	31	38	18	0.441
Other cases*	75	—	2	—	1	5	11	14	14	6	10	12	19	24	16	16														
Non-pulmonary tuberculosis† Cases notified	72	3	8	11	8	10	5	9	8	5	4	1	18	14	24	16	.189	23	—	3	7	—	2	1	1	1	6	—	2	0.052
Other cases*	11	—	1	4	—	—	1	—	1	1	1	2	2	5	1	3														
Total 1949	635	4	20	31	24	83	95	132	93	68	52	33	186	158	157	134	1.444	217	1	6	7	1	10	20	38	39	37	38	20	0.493
Total 1948	635	3	33	45	27	86	100	110	84	73	47	27	141	178	167	149	1.46	238	3	9	3	1	12	18	40	49	43	33	27	0.55
1947	618	7	30	27	27	92	111	123	76	65	40	20	160	167	137	154	1.44	276	4	10	7	3	17	29	48	48	41	54	15	0.64
1946	692	4	28	40	29	101	105	140	92	71	52	27	163	204	161	164	1.66	265	4	10	4	—	19	21	51	41	41	40	27	0.64
1945	632	4	29	41	28	8	96	136	75	55	58	25	173	168	138	153	1.53	297	4	11	3	10	15	32	53	55	41	54	19	0.72
1944	648	3	19	27	35	97	103	119	108	71	42	24	165	177	167	139	1.60	256	3	8	4	1	15	32	53	49	34	37	20	0.63
1943	717	10	16	29	31	90	122	161	96	87	53	22	202	169	160	186	1.98	305	10	14	7	3	22	29	66	49	48	42	15	0.82
1942	587	4	12	10	30	29	59	113	103	94	78	55	153	152	128	154	1.62	264	6	11	3	6	2	21	30	42	53	47	43	0.70
1941	588	7	33	30	21	89	80	113	91	71	37	16	144	167	121	156	1.63	310	5	11	7	4	29	32	65	60	43	35	19	0.86
1940	564	5	40	44	20	81	65	113	85	57	35	19	157	179	120	108	1.37	273	2	16	4	3	24	36	44	47	52	36	9	0.66

* Cases coming to the knowledge of the M.O.H. otherwise than by notification.

Table 8.
(Corrected for transfers) Local Figures.

INFANT MORTALITY.

Total 1948	CAUSE OF DEATH	Under one day	Under one week	Weeks			Total under one month	Months											Total 1949	Deaths in Quarters																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
				1-2	2-3	3-4		1	2	3	4	5	6	7	8	9	10	11		1st	2nd	3rd	4th																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
...	Chicken pox	

Table 9.
MATERNAL MORTALITY. Uncorrected Local Figures.

Cause of Death	1949—AGE GROUPS										
	15—	20—	25—	30—	35—	40+					
Cesarian Section					1						
Toxemia of Pregnancy	1				1						
Puerperal Sepsis	2		1		1						
Septic Abortion	3										
Abortion (non-septic)	1	1			1						
Ruptured Ectopic Gestation				1							
Hydatidiform mole											
Puerperal Toxemia											
Eclampsia			1								
Dystocia											
Retained Placenta											
Placenta Praevia	2			1	1						
Post-Partum hemorrhage	1										
Embolism	2										
Ruptured uterus	1										
Obstetric shock	4	1									
Acute yellow atrophy											
Chorea		1									
Intestinal obstruction											
Uraemia											
Pulmonary Oedema											
Total	—	2	3	2	4	—					
Rate per 1,000 total births											
Deaths in institutions											
Age Groups—											
15—20	1										
20—25	4										
25—30	10										
30—35	4										
35—40	4										
40+	—										

3. PREVALENCE AND CONTROL OF INFECTIOUS AND OTHER DISEASES

Diphtheria.

For the third successive year since records have been kept there has been no death from this disease. Last year's lowest level ever of incidence (18) has been well eclipsed by this year's showing of four confirmed cases only.

DIPHTHERIA IMMUNISATION

Group	1949	1948	1947
0—5	5,243	6,790	5,137
	6,112	8,032	6,230
5—16	869	1,242	1,093
Booster Dose ...	4,088	3,792	3,041

It cannot be said that we are satisfied with the response. With 64·57% of child population up to the age of 15 having been immunised there is still room for improvement.

Scarlet Fever.

For the fourth year in succession no death has been recorded in Bristol from this cause, 1946 being the first such occasion since records have been kept.

Cases coming to our notice in 1949 (785) exceeded by 238 those of 1948 (547).

Notifications excluding Port cases.	{	1949 ...	785
	{	1948 ...	547
	{	1947 ...	463
	{	1946 ...	567
	{	1945 ...	697

Poliomyelitis (Infantile Paralysis).

In common with the rest of the country, following the two previous years of high incidence (1948, 29 confirmed cases; 1947, 31 cases), there was a large number of confirmed cases (130) in the city during the year; of these, 85 were male and 45 female.

POLIOMYELITIS	Notified 1949	(Con- firmed)	Notified 1948	(Con- firmed)	Notified 1947	(Con- firmed)
Notified 1st qtr.	9	5	6	2	2	1
„ 2nd „	5	1	6	2	3	1
„ 3rd „	87	62	20	15	66	17
„ 4th „	88	62	17	10	22	12
TOTALS ...	189	(130)	49	(29)	93	(31)

1949—CONFIRMED CASES (Including one Port case).

	Under 5	5—14	15—24	25+	Total
Males	43	24	11	8	86
Females	14	19	7	5	45
TOTAL	57	43	18	13	131

Ten deaths in Bristol were attributed to this cause during 1949—five Bristol residents and five non-residents.

BRISTOL DEATHS :—1 under 1 year
 1 aged 2 years
 1 „ 17 „
 1 „ 20/25 group
 1 „ 40/45 group.

Erysipelas.

One hundred and thirty-five cases of Erysipelas were notified in 1949. This compares favourably with 1947 and 1948 when there were 144 cases, and maintains the low average of the years preceding 1946, which was a record year with only 82 cases notified.

Malaria.

Six cases were notified in 1949 as compared with 13 in 1948; eight in 1947 and 23 in 1946.

Dysentery.

Notifications :—1945 ... 386
 1946 ... 114
 1947 ... 83
 1948 ... 18
 1949 ... 47

From the table it will be seen that the number of dysentery cases was rather more in 1949 than the previous year, but the trend to a lower figure was continued.

Measles.

In the previous year (1948) 5,513 cases were notified and commented upon as being the highest since notification began in 1939. During 1949, 3,700 cases were notified.

Notification	1949	1948	1947	1946	1945
1st quarter ...	2,960	72	1,783	16	2,912
2nd „ ...	447	361	1,813	49	722
3rd „ ...	263	1,355	204	44	67
4th „ ...	30	3,725	65	194	23
TOTALS ...	3,700	5,513	3,865	303	3,724
Deaths ...	4	1	3	—	9

Whooping Cough

There were 369 cases notified during 1949, compared with 1,838 cases in 1948, which was the highest number since notification began in October, 1939.

Year	Notifications	Deaths
1949	369	2
1948	1,838	8
1947	747	4
1946	705	4
1945	497	4
1944	917	11

Notifications	1949	1948
1st quarter ...	69	679
2nd „ ...	128	637
3rd „ ...	63	390
4th „ ...	109	132
TOTAL ...	369	1,838

Respiratory Diseases.

			Deaths (adjusted Registrar General)	
			1949	1948
Influenza	...	...	61	9
Bronchitis	...	...	241	208
Pneumonia	...	...	211	194
Others	...	...	57	69

Notifications of acute primary pneumonia and influenzal pneumonia were 447 in 1949 as compared with 456 in 1948.

Acute Rheumatism.

Acute rheumatism became notifiable in Bristol on 1st October, 1947. The term "acute rheumatism" for notification purposes means any of the following conditions occurring separately or together in a person under the age of 16 years:—

- (a) Rheumatic pains or arthritis accompanied by a rise in temperature;
- (b) Rheumatic chorea;
- (c) Rheumatic carditis;
- (d) Valvular disease of the heart of rheumatic origin.

The following table gives an analysis of the notifications received during 1949.

TABULATION BY AGE, SEX, AND CLINICAL CLASSIFICATION OF CASES NOTIFIED
AS ACUTE RHEUMATISM DURING THE YEAR 1949

Notification Area
CC CB

Clinical Classification of Case Notified	AGE IN YEARS												Total All Ages			Total Both Sexes
	0—4		5—9		10—14		15 over									
	M	F	M	F	M	F	M	F	M	F						
1. Rheumatic pains and/or Arthritis without heart disease	—	1	2	1	6	2	—	—	—	—	8	4	12			
2. Rheumatic heart disease (active (a) with polyarthritis (b) with chorea (c) without other rheumatic mani- festation	—	—	4	7	4	5	1	1	—	—	9	13	22			
	—	—	—	2	1	2	—	—	—	—	1	4	5			
	—	—	2	2	1	—	—	—	—	—	3	2	5			
3. Rheumatic heart disease (quiescent)	—	—	—	—	—	—	—	—	—	—	—	—	—			
4. Rheumatic chorea (alone)	—	1	—	1	—	3	—	—	—	—	—	5	5			
TOTAL RHEUMATIC CASES	—	2	8	13	12	12	1	1	1	1	21	28	49			
5. Congenital heart disease	—	—	—	—	—	—	—	—	—	—	—	—	—			
6. Other non-rheumatic heart disease or disorder	—	—	—	—	—	—	—	—	—	—	—	—	—			
7. Not rheumatic or cardiac disease	—	3	2	2	1	2	—	—	—	1	3	8	11			
TOTAL NON-RHEUMATIC CASES	—	3	2	2	1	2	—	—	—	1	3	8	11			

Acute Rheumatism:—New Cases, 28 ; Recurrences, 21.

TUBERCULOSIS (All forms).

A total of 552 cases of pulmonary tuberculosis have come to the notice of the Department during the year, by notification or otherwise. This compares with 540 during the previous year (1948) and 521 in 1947.

The average for the immediate pre-war years was approximately 500 cases per annum. Deaths from this cause in 1949 numbered 202; there were 210 in 1948 and 251 in 1947 (unadjusted to our figures). The Registrar General's adjusted figures are given below.

Cases of non-pulmonary tuberculosis totalled 83 for 1949 (95 cases for both the years 1948 and 1947). Deaths of city residents during 1949 at a total of 23 improves upon the 1948 low figure of 30 deaths (Registrar General's adjusted figures).

Year	Incidence Pulmonary T.B.	Deaths (R.G. adjusted)	Incidence Non- pulmonary T.B.	Deaths (R.G. adjusted)
1949	552	194	83	23
1948	540	208	95	30
1947	521	241	95	35
1946	598	236	93	30
1945	551	252	81	54

Tuberculosis—Division of Administrative Responsibility.

Under the National Health Service Act of 1946 the Regional Hospital Board became responsible for the diagnosis and treatment of tuberculosis, the Local Health Authority retaining the responsibility for prevention and after care. The Ham Green Hospital Management Committee became responsible for the administration of the Chest Clinic on behalf of the Regional Hospital Board. The tuberculosis after care work has continued to be carried out on behalf of the Local Health Authority by the Voluntary After Care Committee. In spite of these broad changes of administrative responsibility there was little change during the year in the actual detailed working arrangements for chest work. Three of the nurses attached to the clinic are employed by the Regional Hospital Board and two by the Local Health Authority. No decision has yet been taken as to who is the employing authority of the chest physicians (to give the tuberculosis officers their new designation under the Act).

Chest Clinics.

It is known that in the near future the Ministry of Health and the Regional Hospital Board intend reorganising the chest service in such a way that chest physicians will spend part of their time doing chest clinic work, part in responsibility for hospital beds and part in conducting domiciliary visits. The new organisation will probably be arranged on a team basis. Three such teams will probably be formed for the Bristol Clinical Area which, it should be noted, covers a wider

geographical area than the city itself. This is bound to lead to some little difficulty as regards relative responsibilities of the Board and the three Local Health Authorities involved. Although these are the intended future arrangements, by the end of the year no such reorganisation has been carried out, although discussions have been proceeding at officer level between the Local Health Authority and the Regional Hospital Board.

CHEST CLINICS

1947							1949
1,600	New patients.	Adults	...	...	...	...	1,607
653		Children	...	...	...	...	683
5,633	Old patients.	Adults	...	...	...	...	4,463
1,670		Children	...	...	...	...	1,567
3,641	Refill Clinic attendances		...	...	...	...	5,611
13,197	Total attendances		...	...	...	...	13,931
521	Domiciliary visits.	Doctors	...	...	...	...	659
1,387		Nurses	...	...	...	...	4,390

There is no doubt that tuberculosis is one of the major public health problems on which attention should be focused during the next few years, and if the Local Health Authority is to play its part there will need to be considerable upgrading of the services that they provide. True, it is difficult to organise an efficient tuberculosis service in the absence of an adequate number of hospital beds for the treatment of early cases and for the isolation of chronic open cases which should not be allowed complete freedom in the community on public health grounds.

Hospital Beds and Re-Housing T.B. Patients.

In Bristol, as in other parts of the country, there is still a great shortage of hospital bed accommodation largely due to an actual deficiency of hospital beds and, to a slightly less extent, to the shortage of sanatoria nursing staff. This shortage of beds has led to a good deal of delay in the admission of patients to hospital. Many sputum positive cases have had to be nursed at home, sometimes in very inadequate premises.

These cases are given a certain amount of priority for re-housing by the Housing Department, and in fact during the year 79 such patients were re-housed. Nevertheless, there are still many patients who need re-housing, although it is appreciated that the Housing Department have many calls of priority for re-housing. Perhaps the Local Health Authority may contribute here by the provision of hostels for the accommodation of the chronic incurable open case, by the provision of night sanatoria for sleeping open cases who are normally housed in unsatisfactory conditions and by taking powers to provide boarding out arrangements for the children of such families.

Boarding Out of Children.

In the meantime the Children's Department have been asked to do what they can to contribute towards the solution of this boarding out

problem, but they already have so many commitments that it is doubtful whether their contribution will ever be very large. There is always a certain amount of difficulty in boarding out any child with suitable foster parents. These difficulties are much increased in the case of children from tuberculous households and the Local Health Authority may well have to explore the possibility of providing preventoria for such children, particularly if, as intended, the Local Health Authority embark on a programme of B.C.G. vaccination.

Domiciliary Care.

Cases which have been unable to gain hospital admission have been nursed at home and this has entailed an increased number of domiciliary visits both by the nursing and medical staff. Fortunately no difficulty has been experienced in the provision of home helps or home nurses. In some areas this problem of home treatment has been tackled energetically by admitting patients to sanatoria for a short spell to carry out initial treatment and to teach the patient the rudiments of hygiene and self care, after which continuation treatment, including artificial pneumothorax refills and so on, have been carried out in the patient's own home. In view of the shortage of beds in Bristol it may well be that this contribution towards the solution of the tuberculosis problem will have to be tried, although, of course, it has many disadvantages.

Examination of Contacts.

During the war the system of routine contact examinations was suspended owing to shortage of staff. This led to the accumulation of many cases awaiting examination and it will be some considerable time before this leeway is made up. Meanwhile the pressure has increased on the x-ray facilities at the Central Health Clinic and it is becoming apparent that a fully efficient chest service will be possible only by the provision of more adequate central facilities or by decentralising the service to various hospitals within the city. The latter will be the most likely development, for the policy of the Board seems to be to encourage the attendance of tuberculosis cases at chest clinics housed in general hospitals.

Welfare.

The Bristol Tuberculosis Voluntary Care Committee continued its good work of alleviating distress and suffering amongst the tuberculous, and Mr. Bryant, the Tuberculosis Welfare Officer, has included a short report on their activities.

II.

THE

PERSONAL HEALTH

SERVICES

1. MATERNITY AND CHILD WELFARE.
2. NURSING SERVICES.
3. DENTAL HEALTH.
4. MENTAL HEALTH.
5. PREVENTION OF ILLNESS, CARE AND AFTER CARE.
6. HEALTH AND TUTORIAL EDUCATION.
7. VACCINATION AND IMMUNISATION.
8. AMBULANCE SERVICES.

1. MATERNITY AND CHILD WELFARE.

By Dr. A. I. ROSS (Chief Assistant for Maternity and Child Welfare).

I. CARE OF MOTHERS AND YOUNG CHILDREN.

Nineteen forty-nine has been the first full year of operation of the National Health Service Act, 1946.

The Act has produced surprisingly little change in our service. Although all patients are entitled to free treatment from their own practitioners, attendances at clinics have not decreased. Many general practitioners continue to refer their patients to these centres for advice on infant feeding and management.

Birth notifications and births at institutions were both three hundred lower than in 1948. 59% of births took place in hospital, 9% in private maternity homes; the total delivered in institutions being 68% of the total births.

Municipal ante-natal clinics continue to be allotted a fixed monthly number of maternity bookings for Southmead and Mortimer House Maternity Hospitals. These beds are allotted to each clinic according to the number of mothers attending. In March, Southmead Hospital Management Committee reduced the monthly allocation. In spite of this the number of Bristol mothers delivered in these hospitals increased by 75, indicating more emergency admissions or more admissions of patients who had not been booked through clinics.

Patients continue to be admitted to hospital for delivery only on medical or social grounds. Reports on social conditions are obtained from municipal midwives and given to doctors at municipal ante-natal clinics, or to the staff of Bristol Maternity Hospital if the patient wishes to be admitted there. 1,226 patients attending our clinics were booked for confinement in hospital on social grounds.

In March, as the obstetric unit at Mortimer House and Southmead had had a period of sustained pressure, the hospital authorities had to issue instructions that patients could be discharged on the fourth day of the puerperium. In point of fact a few patients only were discharged early and none before the eighth day.

Medical Staff at Clinics.

The following different categories of doctors staff our clinics:—

1. Full-time assistant medical officers of health, most of whom do both maternity and child welfare and school work.
2. General practitioners:—
 - (a) each taking one session a week in the area of their practice;
 - (b) each taking one session a week outside the area of their practice.
3. Doctors not in general practice who take several sessions a week—mainly married women.
4. The staff of the Department of Child Health of the University.

Ministry of Health Circular 118/47 suggested joint appointment of medical staff by Local Health Authorities and Regional Hospital Boards, and a greater degree of specialisation of whole-time assistant

medical officers of health in either maternity or child welfare, with provision for essential, practical and continuous experience in the clinical field.

In Bristol, even with good hospital facilities, this has so far proved impossible to carry out. Only one of our staff has a joint appointment with the Local Health Authority and Regional Hospital Board. Three others work one session a week in the out-patient department of the Children's Hospital. One of these is a senior member of the staff and is given a degree of clinical responsibility. The others are present mainly as observers, and change every six months.

How the assistant medical officer of health can be given clinical responsibility in the curative field is not clear. Certainly most of them cannot participate usefully in the work of an appropriate paediatric department or children's hospital. Possibly the future may see them working part-time in general practice, but that must be a long way off.

As a correlative to full-time Public Health doctors doing curative medicine we have general practitioners taking clinics. One of our larger clinics was almost entirely staffed by general practitioners on a sessional basis. Unfortunately two had to give up during the year because of pressure of work in their practices. It has now been possible however, to replace them with Public Health staff.

Clinics.

Ante-Natal. At the end of the year there were 15 ante-natal centres holding 31 doctor's sessions per week. The number of new patients who attended during the year (5,252) was 146 less than in 1948, and total attendances (33,969) were 417 fewer.

Midwives' ante-natal sessions (18 per week), are held at all centres and the total attendances of 10,575 was only 13 less than 1948.

Consultative ante-natal clinics were held at 10 of the above centres with an average total of $7\frac{1}{2}$ sessions per week. Attendances at 7,603 showed an increase of 758 over the previous year.

Two new centres were opened during the year in church premises in the Lockleaze and Inns Court areas.

Post-Natal. This work was carried out in nine centres with an average total of eight sessions per week. It is gratifying to report an increase in the use of these facilities; 2,868 new patients showing an increase of 426 over 1948; with 4,810 total attendances showing an increase of 639 over 1948. The new attendances equalled 54.6% of new ante-natal patients, an increase of 9.6% over 1948.

Infant Welfare. Four new centres were opened during the year in the Fishponds, St. George. Inns Court and Ullswater Road areas, bringing the total centres to 31 with an average of $61\frac{1}{2}$ weekly sessions. Although the number of births in the city fell in 1948 and 1949 the attendances at infant welfare centres were well maintained.

	1949	1948
Children under 1 year ...	75,440	78,218
Children 1-5 years ...	29,769	28,454

Attendances of new children under 1 year equalled 89.5% of the births to Bristol residents during the year. Attendances of children over one year at infant welfare centres remain much too low.

Special Diagnostic Clinic. Although there was a fall of 67 in the number of new patients (351) as compared with the previous year, the total attendances (1,600) was an increase of 261.

Premature Babies. There were 426 premature births notified during the year, a decrease of 138 on the previous year, but the deaths of infants under one month (71) were only two fewer than in 1948. The percentage of babies born prematurely was 5.7.

The table on page 34 shows the place of birth and mortality of premature babies.

The policy of removing premature babies born at home to the appropriate unit at Southmead Hospital has continued. From this table it will be noted that of the babies born at home; the three under 3 lbs. were transferred to hospital; and five of the nine between 3 and 4 lbs. in weight were transferred to hospital. Only twelve babies under 4 lbs. in weight were born at home compared with 41 in hospital.

Meetings were held with representatives of the South West Regional Hospital Board, Executive Council, Local Medical Committee and Southmead Hospital Management Committee to arrange a resuscitation service and the subsequent nursing of premature babies born at home. In co-operation with Southmead Hospital Management Committee, a follow-up of premature babies on discharge from Southmead Premature Baby Unit by two health visitors has been started. One of the health visitors is employed part-time by Southmead Hospital Management Committee, the other by the Local Department of Public Health. The Local Authority health visitor works in the Premature Baby Unit one day a week and sees the mother and child before discharge. A copy of the memorandum on the "Scheme for the Care of Premature Babies" is printed herewith as an appendix.

Residential Convalescence. The National Health Service (Amendment) Act, 1949, has amended Section 22 of the National Health Service Act, 1946, under which charges could be made for the provision of "articles" only. For example; when convalescence was provided by the Corporation only food could be charged for and payment by the patient had to be limited to 15/- per week. The National Health Service (Amendment) Act, 1949, authorises charges for "residential accommodation, food or articles." Although increased charges will be made where possible, as so few of the applicants the committee send can pay more, this amendment will not make a great difference.

During the year 26 applications for convalescence were received, in respect of mothers and children under five years of age, as follows:—

Mother only	...	...	1
Mother and 1 child	...	...	8
Mother and 2 children	...	...	10
Mother and 3 children	...	...	5
Children unaccompanied	...	...	2

All were approved by Committee for periods varying from two to eight weeks. Four cases were subsequently cancelled but the remainder have received or are receiving convalescent care.

Ophthalmia Neonatorum. Nine cases were notified during the year. None was confirmed gonococcal.

In addition 205 notifications of slightly inflamed eyes were received from midwives and health visitors. They followed up these until the eyes were clear.

PREMATURE BIRTHS 1949.

AT HOME				NURSING HOMES *				HOSPITAL				TOTAL			
	Cases	Trans-ferred to Hosp.	Nursed entirely at Home	Deaths	Alive at one month	Mort-ality %	Cases	Deaths	Alive at one month	Mort-ality %	Cases	Deaths	Alive at one month	Mort-ality %	
Under 3 lb.	3	3	—	2	1	66.6	1	1	—	100.	22	17	5	77.3	6
3-4 lb.	9	5	4	3	6	33.3	2	1	1	50.	19	9	10	47.4	17
4-5½ lb.	61	10	51	3	58	4.9	35	3	33	5.7	193	13	180	6.7	271
Not weighed	3	3	—	2	1	66.6	5	3	2	60.	73	15	58	20.5	61
Total	76	21	55	10	66	13.2	43	7	36	16.3	307	54	253	17.6	355
											426	71			16.6

* NOTE.—No cases were admitted to Hospital from Nursing Homes.

Appendix A.

MEMORANDUM ON THE SCHEME FOR THE CARE OF PREMATURE BABIES.

To All General Practitioners.

The South Western Regional Hospital Board in co-operation with Bristol Local Health Authority and Southmead Hospital Management Committee have considered schemes for the care of Premature Babies in the Bristol Clinical Area. These schemes will operate first of all as from 17th April, 1950, in Bristol only.

The schemes now proposed have been prepared in consultation with Professor Drew Smythe, Professor A. V. Neale, Dr. Beryl Corner, the Bristol Local Health Authority, Bristol Executive Council and Bristol Local Medical Committee.

The schemes are as follows :—

- I. Emergency resuscitation and hospital facilities.
- II. Domiciliary Nursing Service.
- III. Follow-up Supervision.

SCHEME I.

Available for the whole clinical area from Thornbury to Weston-super-Mare. Southmead Hospital is prepared to ADMIT TO THE PREMATURE BABY UNIT any premature babies born at home who are in need of special nursing and medical care. These will chiefly be infants weighing less than $4\frac{1}{2}$ lbs. at birth, or such larger babies as are in poor condition.

Since the most critical time for these babies is immediately after birth, every effort should be made to obtain all necessary assistance as soon after birth as possible. Where, from the calculated gestation period the baby is expected to be very small, it is desirable to send the mother to hospital as soon as labour commences, so that resuscitation for the baby is available at the time of birth. As far as beds are available, Southmead Hospital is prepared to take such emergency obstetric cases.

If the baby is born at home and HOSPITAL ADMISSION DESIRED, on receipt of a telephone call to the SOUTHMEAD EMERGENCY BED BUREAU, the Premature Baby Resuscitation Team will proceed to the home. This will consist of an ambulance with a specially trained premature baby nurse and resuscitation equipment, *i.e.*, a heated cot, and oxygen tent. *On request* to the telephonist the Paediatric Registrar may also attend. The services of a Consultant Paediatrician are available under the ordinary domiciliary consultation scheme if desired.

After resuscitation the infant will be transferred to Southmead Hospital.

FOR TRANSFER OF PREMATURE INFANTS FROM PRIVATE NURSING HOMES OR OTHER HOSPITALS to the Southmead Unit (where necessary), the same arrangements apply.

SCHEME II.

Domiciliary Nursing Service (Available for Bristol City only).

From 1st February, 1950, Bristol Local Health Authority in co-operation with Southmead Premature Baby Unit will provide a premature baby team for the DOMICILIARY NURSING CARE of suitable premature infants. This is designed to provide immediate resuscitation for premature infants born at home and to give special care to those more robust infants who are fit to remain at home.

Details of Arrangements.

As far as hospital beds allow it is desirable to send to hospital for delivery all patients with a gestation period of less than 37 weeks if labour commences at home.

Where this is not possible, *e.g.*, precipitate labour, refusal of the mother to go to hospital, or where a baby under $5\frac{1}{2}$ lbs. is born at home, the premature baby team can be summoned by *telephoning the telephonist at the Central Health Clinic*, but every effort should be made to obtain all necessary assistance for resuscitation of the infant *before* the child is delivered. On receipt of the call, the telephonist will arrange for the team to proceed to the patient's house.

The team will consist of :—

- (a) A specially trained nurse.
- (b) Special equipment (Cot, hot-water bottles, feeding bottles, oxygen tent, etc.).
- (c) *On request* the Paediatric Registrar from Southmead Hospital will also attend. If the services of a Paediatric Consultant are required they should be obtained through the normal domiciliary consultation arrangements.

Three nurses are available for this work. Two are domiciliary midwives who have had three months' instruction at the Premature Baby Unit at Southmead. They will work in close co-operation with the Southmead Unit and will visit it from time to time to keep in touch with further developments in the care of premature babies. The third nurse, a specially trained premature baby nurse who is also a qualified health visitor, will normally work in the Premature Baby Unit at Southmead.

These nurses have been trained in special premature baby care and feeding by the consultant paediatric team at Southmead Hospital and will be expected to carry out the same routine in the domiciliary care of these babies. While not being able to accept clinical responsibility for the individual care of babies nursed under this domiciliary scheme, the Southmead Paediatricians will keep some general supervision over the Premature Nursing Team and will receive copies of their records and will give advice if necessary.

When the child has been resuscitated, a decision as to whether the baby can remain at home should be made, largely on the child's condition and birthweight, the home conditions, and the availability

of hospital beds. As a routine, any baby weighing less than $4\frac{1}{2}$ lbs. should be transferred to the Premature Baby Unit. Any baby requiring continuous oxygen is unsuitable for home care.

For the home nursing of premature babies the equipment will be left in the home, and one of the nurses will continue to look after the child.

Medical Aid for Premature Babies.

Midwives will obtain medical aid for premature baby cases in the usual way from any approved General Practitioner who has agreed to provide such aid. If a medical practitioner has already accepted responsibility for the medical maternity service of the patient, or has attended her ante-natally, and indicated willingness to accept responsibility at the confinement, if required, he will be called.

To avoid delay, at the same time as the General Practitioner is summoned, the midwife will send for the Premature Baby Team, *i.e.*, nurse and equipment.

Summary.

Any General Practitioner or midwife summoned to a mother in premature labour living inside Bristol City Boundary should take the following steps:—

- (a) Endeavour to get the mother into hospital if the gestation period is less than 37 weeks, or
- (b) Telephone the Central Health Clinic for the Premature Baby Team.

If a general practitioner requires the services of a paediatrician the telephonist should be informed. A paediatrician will not come with the team unless specially summoned.

SCHEME III.

Follow-up Supervision.

Experience has shewn that for the early weeks after discharge from hospital rather more supervision is desirable for the small or premature infant than is available under normal infant welfare arrangements. Much of the supervision required is of a nursing character rather than medical. In association with Bristol Local Health Authority arrangements have been made whereby two health visitors who have received special premature baby nursing training at Southmead have been assigned to this work. Both these Health Visitors will spend some time in the Premature Infant Unit each week in order to familiarise themselves with the mother and baby before their discharge from hospital.

In Bristol City one of these nurses will visit the patient's home two or three days before proposed discharge date for the following purposes:—(i) To satisfy the Paediatricians that there is no infection in the home, (ii) to help the mother with nursery equipment and arrangements for the baby's care, and (iii) to make a general survey of the living accommodation in order to decide whether the home is

suitable to receive a baby still below average weight. In the event of an unfavourable report on any of these items the child would be retained in hospital longer.

After discharge of the baby, one of these nurses will visit immediately and will continue to do so until she is satisfied that the mother and baby are making satisfactory progress. She will weigh the baby regularly.

A special premature baby out-patient clinic has been started in Southmead Hospital largely for the purpose of studying the progress and development of these babies rather than for giving routine advice, which, at any rate, for the early weeks, can be given by the visiting special nurse. This special clinic is intended for any premature infants treated in Southmead Hospital and is not confined to Bristol patients.

These special visiting arrangements will also be extended to the clinical area shortly.

On discharge of the baby from hospital a discharge report indicating the nature of follow-up arrangements made will be sent to the General Practitioner with whom the mother is registered and also to the local health authority.

C. C. HANCOCK, *Secretary.*

SOUTHMEAD GENERAL HOSPITAL GROUP
MANAGEMENT COMMITTEE.

R. H. PARRY, *Medical Officer of Health,*
BRISTOL.

II. THE MIDWIFERY SERVICE.

Non-Medical Supervisor of Midwives : Miss Gearing.

General.

The total number of deliveries by midwives during the year was 2,295. 1,753 were as "midwives," that is acting on their own responsibility without a general practitioner in attendance; and 532 (23.3%) were as "maternity nurses," that is with a general practitioner in charge of the case. This represents an increase of 5.5% in "maternity nurse" cases on 1948, and 8.1% on 1947, as the following table shows:—

Cases delivered by midwives as	1947	%	1948	%	1949	%
Midwives	2,561	84.8	1,826	82.2	1,753	76.7
Maternity nurses	458	15.2	395	17.8	532	23.3

The increase of work as "maternity nurse" following the National Health Service Act, 1946, has not been as great as we thought likely. In one or two areas of the city almost all the work of the midwives, however, is as maternity nurses.

The Rushcliffe recommendations give a yearly case-load of 66 deliveries for a midwife working in favourable circumstances in an urban district, and 90 deliveries for a midwife with a pupil. Our establishment of midwives is 36 and we take up to 18 pupils. Because of illness and retirement the number employed at any one time is less than 36. Taking all midwives and pupils working each month we find that if they had been working according to Rushcliffe recommendations they would have delivered 2,337 cases. Since the Rushcliffe recommendations were made in 1943, conditions of domiciliary midwifery have changed considerably and we have found that although the midwives employed did roughly the number of cases given in the Rushcliffe recommendations, they were exceedingly busy. The reasons for this are:—

(1) Extended Puerperal Care.

Towards the end of 1948 domiciliary midwives undertook to visit the mothers they had delivered until 28 days after confinement. In the third week of the puerperium, three visits are usually made and, in the fourth week, two visits—an additional five visits in all. This replacement of health visitors by midwives in the third and fourth weeks of puerperium was started in Bristol in 1943, but had to be discontinued in 1947 because of the increased work of the midwives due to a rise in the birth rate. The aim of visiting by the one person, during the first four weeks, is to ensure continuity of supervision in the critical period when the mother is getting up and beginning house-work and assuming personal charge of her child. This arrangement is a recommendation of the "Report of the Working Party on Midwives" and the "Report of the Royal Commission on Population."

(2) Gas and Air Analgesia.

A notable feature of the work of municipal midwives during the year was the very large increase in the use of Gas and Air Analgesia. In January the number (51) was below the monthly average for 1948 but, thereafter, the number of patients receiving this treatment rose to a total of 103 in July and to 140 in December. The total for the year, 1,289, showed an increase of 597 over the 1948 total, and the percentage of patients receiving Gas and Air Analgesia increased from 31.2% in 1948 to 56.4% in 1949. From 12th August, 1949, midwives were asked to inform the supervisor of midwives whenever Gas and Air was not given to a patient. Of 921 patients delivered during this period 78.62% received Gas and Air. These reasons have been analysed in the following table:—

REASONS FOR REFUSAL OF GAS AND AIR ANALGESIA.

Parity of Mother.

REASON	1	2	3	4	5	6	7	8	9	10+	Total	% of total deliveries
1. Medical:												
(a) Respiratory Infections ...	3	2	—	—	1	1	—	—	—	—	7	0.76
(b) Preclamptic toxæmia ...	—	1	2	2	—	—	—	—	—	—	5	0.54
(c) Made patient sick ...	—	—	—	1	—	—	—	—	—	—	1	0.11
2. Attendance of Mid. extremely short	2	18	11	6	4	2	3	—	1	—	47	5.10
3. Not examined by Dr. for Gas and Air	3	8	7	2	2	—	2	—	—	1	25	2.71
4. Not necessary—easy labour ...	—	—	—	2	1	—	—	—	—	—	3	0.33
5. B.B.A. ...	4	15	10	4	3	—	—	1	1	—	38	4.12
6. Emergency ...	—	1	1	—	—	—	1	—	—	—	3	0.33
7. No help present ...	—	—	1	1	—	—	—	—	—	—	2	0.22
8. Dr. engaged but not present ...	—	1	3	—	—	1	—	—	—	—	5	0.54
9. Arrival of machine delayed, etc. ...	—	2	3	2	—	1	—	—	—	—	8	0.86
10. Insufficient information why ...	—	2	—	—	—	—	—	—	—	—	2	0.22
11. Patient refused ...	2	11	14	9	6	1	4	2	1	1	51	5.54
TOTAL	14	61	52	29	17	6	10	3	3	2	197	21.38

Among the reasons for Gas and Air Analgesia not being given, "patients refusing" head the list with a percentage of 5.54. A similar result was given in "Maternity in Great Britain" (1948), the report of the Joint Committee of the Royal College of Obstetricians and Gynaecologists, and also the Population Investigation Committee, where 6% of those offered analgesia refused.

In October, 1949, the Central Midwives' Board changed the conditions under which a midwife could give gas and air analgesia to a patient. Previously the patient had to be examined by a registered medical practitioner within one month before confinement. The Board now considers that a midwife can administer gas and air analgesia provided:—

"the patient has *at any time* during the pregnancy been examined by a registered medical practitioner who has signed a certificate that he finds no contra-indication to the administration of nitrous oxide and air analgesia by a midwife. If any illness which requires medical attention subsequently develops during pregnancy the midwife must obtain information from a medical practitioner that the certificate remains valid."

This makes the administration of analgesia easier, as previously, if the patient went into premature labour, or if the labour were delayed it might have been impossible to give analgesia because she had not received the necessary examination within one month.

Only one of our midwives is not trained to give gas and air analgesia.

(3) Investigation of Social Conditions.

In the case of all Bristol patients who wish to go to hospital for confinement, and where there is no medical reason for hospital delivery, domiciliary midwives must report on the suitability of the patient's home for confinement. In 1949, 1,847 reports were made. In many cases one report entails more than one visit because of the patient being out at the time of the midwife's call.

Because of the increased work, the conclusion of the Working Party on Midwives that the case-load of a midwife should be reduced to 55 a year, in urban areas, by 1953, is considered reasonable.

Housing and Accommodation of Midwives and Pupil Midwives.

We have twenty houses or flats occupied by twenty-four midwives. The Housing Committee has co-operated extremely well in the provision of midwives' houses and during the year three new houses were provided. It is, of course, most important that midwives live on or near the district where they work and this would not have been possible but for this co-operation of the Housing Department.

Accommodation for Pupils. Midwives themselves have never been too happy in having pupils in their homes, and the position has become much worse in recent years on account of the difficulties experienced in shopping and housekeeping, and the impossibility of

obtaining domestic help. In some cases the health of the midwife has suffered, and this has resulted in the deterioration of her district work. Frequent requests have been received for the removal of pupils to lodgings, because of the strain on midwives. It is, however, by no means easy to find suitable accommodation in lodgings for pupils.

Landladies have their own problems when they take pupils as boarders, and there are frequent changes as a result, the main difficulties so far as they are concerned being: (a) the pupil changes every three months; (b) household disturbance because of telephone calls at any hour of the day or night; and (c) the irregular hours of pupil midwives, which leads to difficulty in preparing meals.

For these reasons it is thought that pupil midwives should be accommodated in two hostels, each taking 9-10 pupils, one in the North of the city, in the Redland-Clifton area, the other in the South, in the Knowle district.

Training.

Training of Pupil Midwives. Following on the changes brought about by the National Health Service Act, 1946, a deputy to the non-medical supervisor of midwives was appointed at the end of the year. In addition to being deputy supervisor, she is responsible for the teaching of pupil midwives while working on the district in Bristol.

In July, a Joint Committee was set up, consisting of representatives of the Board of Governors of the Teaching Hospital Group, Southmead Hospital Management Committee and the Health Committee, to discuss questions of mutual interest in the training of midwives.

Post-Graduate Training. Six midwives attended the post-graduate school at Oxford; one midwife was trained in gas and air; two midwives attended a three months' training course in the premature baby unit; and one midwife a six weeks' course; bringing the total post-graduate work to 38 weeks.

Transport. Six midwives use their private cars for duty and are paid the usual travelling allowance. Cars are available from the Council's Transport Service for the transport of midwives and their equipment, including gas and air analgesia apparatus.

To ensure that the gas and air apparatus are efficiently maintained they are stored and serviced by the pharmacist at the Central Health Clinic.

Staff.

Part-time Midwives. Section 23 of the National Health Service Act, 1946, amended Section 1 of the Midwives' Act, 1936, under which the Local Supervising Authority had to arrange for an adequate service of *whole-time* midwives to look after patients in childbirth in their homes.

Under the National Health Service Act it is not necessary that the midwives be whole-time. From November, 1949, advantage was taken of this to employ three part-time midwives to undertake nursing

for a few hours a day. They are a most valuable addition to the staff as they allow a very elastic arrangement—their hours being related to demand.

There were six resignations during the year and seven new midwives were appointed.

III. DAY NURSERIES, RESIDENTIAL NURSERIES AND CHILDREN'S HOMES.

(1) Day Nurseries (Inspector of Day Nurseries : Sister Lambert).

There is no change to report in either the number of nurseries (thirteen) or the accommodation available (520 places). The Health Committee being responsible for:—

<i>Nursery</i>	<i>No. of places</i>
91 Ashley Road ...	50
Avonmouth ...	50
141 Coronation Road ...	45
12 Dowry Square ...	30
Granby House, Bedminster ...	45
Knowle Park ...	50
Monks Park Avenue ...	50
17 Oakfield Road ...	35
16 The Paragon ...	25
Roxburgh ...	40
23/25 Southmead Road ...	40
264 Wells Road ...	30
81 Whitehall Road ...	30
	<hr/> 520 <hr/>

These 520 places have been approved by the Ministry of Health to provide accommodation for 200 children under two years of age and 320 children from 2–5 years.

496 children have been admitted during the year, and the waiting list has again increased by 14% of the places available. The waiting list for the last three years shows an increasing demand for day nursery accommodation.

At December 31st, 1947 ...	187
At December 31st, 1948 ...	377
At December 31st, 1949 ...	456

Attendances have increased by 2.4% over 1948 and averaged 89.4% of the places available.

During the year four nurseries were in quarantine for Scarlet Fever; two for Infantile Paralysis; nine for Measles; three for Whooping Cough; two for Chicken Pox; and one for Sonne Dysentery. These were the main reasons for the 10.6% absenteeism.

In order to make the utmost use of the places provided, all admissions are checked periodically to ascertain whether the conditions which determined the reasons for admission have altered. In some cases—family illness, for example—sufficient improvement has been made to enable a child to return home. Each nursery has been allocated to a health visitor who, when required, can make a visit and report to the matron. In this way only necessitous children are admitted, and continue to attend.

Classification of Children attending.

		%
(a) Unmarried mothers who have their children at home	84	14.8
(b) Widows	23	4.1
(c) Women separated from their husbands	66	11.7
(d) Mothers ill, illness in the family, or mother deserted	84	14.8
(e) Divorced	4	0.7
(f) Public Health grounds, <i>i.e.</i> , bad housing, father out of work, father working away from home, child not thriving	40	7.0
(g) Mother nursing, teacher, student, domestic nursery staff	30	5.3
(h)	236	41.6
	<hr/> 567	<hr/> 100.0

Group (h) is made up of:—

(a) Children of families who have moved from rooms into new housing estates. When the removal has been from one or two furnished rooms it means that the husband's wages are insufficient to meet the new rent and to furnish the new house. In the family interest and for the children's welfare the mother has been forced to go to work to make life at all possible.

(b) Children of families where there are other brothers and sisters and the father's wages are low, say up to £5 weekly.

Many mothers say they are unable to clothe their children properly, even with the family allowances, unless they go out to work to supplement the family income.

Day nurseries have ceased to open on Saturdays as from August 27th. The Saturday attendances had been very poor since 1946 and many mothers had expressed a desire for longer opening hours from Monday—Friday. For the time being the hours of opening for the reception of children are 8 a.m. to 5.30 p.m.

Economy still determines the amount of decorations that can be carried out. It is hoped that five nurseries will have been decorated internally by the end of the financial year. This leaves seven nurseries which cannot be decorated this year, while all are in need of outdoor painting if only to preserve the wood-work.

(2) Nurseries and Child Minders (Regulation) Act, 1948.

Four applications for registration as child minders have been received this year. In one case the Committee refused registration as the means of escape in case of fire were inadequate. In another case the application for registration was withdrawn. The others are being dealt with.

The means of registration of child minders under this Act are cumbersome. Whenever a Child Minder is registered the City Council has to make an order:—

- (1) laying down the maximum number of children to be accommodated;
- (2) the precautions to be taken against infectious diseases.

Modifications to the house, *e.g.*, sanitary accommodation and fire precautions have to be made proper before the premises are registered. In most cases the order made by the City Council will require that fewer children will in fact be accommodated than the number desired by the applicant. The estimated number is based on 25 sq. ft. per toddler.

Two Child Minders taking children in wholly unsuitable homes immediately ceased to do so when informed about this Act.

(3) Children Act, 1948.

Medical Care of Children in Children Homes.

In July, 1949, the Children's Committee decided that:—"The Medical Officer of Health will continue to act as Medical Officer to the Children's Homes and will advise the Committee and the staff of the Homes on all medical matters relating to the children, and will report monthly on matters of health."

The general supervision of the medical aspects of the Children Homes and Nurseries, run by the Children's Committee, and the routine examination of children in these institutions, is undertaken by two of the whole-time staff, with others relieving during holidays and sickness.

The relationship between Children's Officers and Medical Officers of Health was clarified in Home Office Circular 193/49 which stated:—

"Matters on which it is considered that the advice of the Medical Officer of Health should be obtained include:—arrangements for the appointment of medical officers for the homes: the duties of medical officers (*e.g.*, medical examinations of children on admission and subsequent routine examinations; the provision of suitable medical attention as required; the keeping of medical records; and general supervision of dietary; health and hygiene): arrangements for dental care; hours of rest and sleep; and the medical aspects of the planning of accommodation of new homes, and of existing homes where substantial alterations or re-organisation are proposed; and of the staffing of homes."

Consultation on the lines indicated in the Circular had already been in operation in Bristol.

(4) Residential Nurseries.

Babies' Home, Downend. (Medical Supervisor: Dr. Greta Hartley).

During 1949 the Babies' Home has gradually taken over its new function as a Reception Centre, with considerable increase in "short-stay" admissions, most of the children being transferred after periods of two or more weeks to country nurseries, boarding out, etc.

Many of these children were this year considerably below the normal physical standard on admission, and a number had actual infections such as bronchitis, enteritis, etc. Two were found to be suffering from primary tuberculosis, thus showing the necessity for the isolation of new admissions if risk to those already in the Home is to be avoided.

There were, however, no epidemics during the year and the general health of the children has been good, although individual infections, especially upper respiratory, otitis, etc., continue to cause debility, especially to the children between 1-3 years.

Five children were transferred to hospital for treatment and all made good recoveries.

Two with primary tuberculosis—one to Southmead Hospital; one to Frenchay Sanatorium.

Two with gastro-enteritis to Ham Green Hospital.

One with cervical abscess—to Children's Hospital.

Frenchay and Nore House Residential Nurseries.

(Medical Supervisor: Dr. Alison Craig).

During the year 1949, an important event for the general welfare of the children was the closing of the two wards at Frenchay General Hospital and the transfer back to Frenchay Lodge and the new Nursery which has been opened at Greenhill House, Timsbury. The better accommodation and the increased facilities for nursery school work, gave the children improved conditions for their physical and mental development.

The position at Nore House Nursery remained as before and is maintaining good progress.

The health of the children in all three nurseries was, on the whole good, apart from minor nursery infections and small epidemics of measles and mumps, of minor severity. In all cases good recoveries were made.

At one of the nurseries, a child developed acute poliomyelitis, and is at present making satisfactory progress at Winford Orthopædic Hospital. A second child developed a primary tuberculous infection and is still under observation at Ham Green. The origin of this was found to be his tuberculous infected mother from whom he had recently been removed.

A third child developed a cerebral tumour of vascular origin. She is at present in Ham Green and owing to her marked degree of mental deficiency will not return to the nursery.

Dental inspection was carried out in all the nurseries by a school dental officer.

(5) Public Health Act, 1936.*Registration of Nursing Homes.*

Changes in accommodation were made in several homes during the year, and on the 31st December, 1949, there were:—20 nursing homes registered, with accommodation for 83 maternity and 320 other patients.

IV. UNMARRIED MOTHERS' WELFARE.

(*Welfare Officer: Mrs. N. H. Stott*).

During the year, 341 applications in respect of an illegitimate child and mother, were received. Of these:—

5	were girls under 16 years of age		
8	" " "	17	" " "
84	" " "	21	" " "
74	" women over 30	"	" "
262	cases were in respect of a 1st illegitimate child		
52	" " " "	"	" 2nd " "
23	" " " "	"	" 3rd " "

In the younger age groups varying types have been involved, some obviously of sub-normal mentality, although not certifiable as mentally defective. Amongst the others, in one or two instances criticism has come from the girl's mother regarding sex education given in schools. It is suggested that a review of the question of the age of the child when the subject is introduced, might be useful. In the majority of cases, where a third or even fourth child was expected, the parties had lived together for a considerable time. Some of them have now married. Concern is felt at the number of girls who agree to live with the father of the child when he is not free to marry in the hope that a divorce will follow. The effects of this are far reaching, the wife and legitimate children usually suffering as a result.

At the end of 1948, there were 75 cases outstanding where the child had not been born, making a total of 416 cases to be dealt with. Arrangements were made as follows:—

Admitted to hospital for confinement	...	244
Admitted to hospital immediately after birth		
of child	... ..	3
Born at Mother and Baby Home	... ..	22
Home confinement	... ..	20
Assistance in confinement not sought	... ..	48
Applications withdrawn	... ..	11
Child not yet born	... ..	68
		<hr/>
		416
		<hr/>

Mother and Baby Homes.

It was anticipated that the greater financial assistance given to maternity cases under National Insurance might result in fewer girls seeking admission to Mother and Baby Homes. So far this has not been the case. 137 girls were admitted to Homes during the year. They differed greatly in their need, in their upbringing, and in their plans for the future.

Two facts have been obvious: (1) that they have derived great benefit from a stay in a Mother and Baby Home. Regular hours, freedom from anxiety, and often freedom from a tense atmosphere of recrimination have wrought a change; (2) that the time thus spent has given the opportunity to make considered decisions for the future, thereby giving the greatest help to mother and child.

It is a matter of great regret that a hostel for mothers and babies is not yet established. It is our urgent need in this city, and would provide the natural sequence to the foundation laid in Mother and Baby Homes. At present, the ultimate separation of mother and child in a number of cases is inevitable, and the cause of much hardship and disappointment. The limited residential nursery accommodation has added considerably to the problem of rehabilitation of mothers who have no home, or receive no help from their parents. An extended stay in a mother and baby home is often compelled through lack of hostel or nursery accommodation. Only about 60 per cent. of the girls are able to return to their homes, which indicates the need for a hostel or more nursery accommodation.

Affiliation Work.

At the end of 1948, 305 cases were incomplete, to which must be added 341 applications received during the year, a total of 646.

The following is a more detailed analysis of affiliation work:—

Affiliation orders obtained	...	...	37
Order enforced	...	...	2
Agreements	...	...	63
Information laid	...	...	15
Payments made direct to girl	...	...	8
Child adopted	...	...	38
Married to putative father	...	...	54
Co-habiting	...	...	39
Married to another man	...	...	12
Putative father not traced	...	...	1
Putative father not known	...	...	6
Putative father died	...	...	1
Returned to live with husband	...	...	3

No action possible:—

(1) Married woman, not entitled to summons	...	...	...	12
(2) Stillbirth, abortion, child died	...			39
(3) Girl certified mental defective	...			4
Girl refused to take action	...	...		4
No corroboration	...	...	...	41
Left area	...	...	...	28
Applications withdrawn	...	...	...	11
Summons not served	...	...	...	2
Incomplete	...	...	...	226
				<hr/> 646 <hr/>

Financial Assistance.

Help was given in 255 cases of arrears and applications for an increased payment under a Court Order.

During the year, the sum of £10,871 2s. 8d. was dealt with. Of this:—

£	s.	d.	
9,631	13	11	was received and paid to, or on behalf of the individual concerned.
965	6	3	was received from mothers and putative father in respect of maintenance of children in various nurseries.
274	2	6	was received in respect of maintenance at Mother and Baby Homes.
<hr/> £10,871 2 8 <hr/>			

The help given to a number of mothers in dealing with their payments is much appreciated by them.

Married Women.

78 matrimonial cases were referred to the office during the year. Many were young wives, and those who had never had a separate home. This is one of the chief factors in the number of broken marriages. Another is that so little thought is given to the future before marriage.

In many instances the case was allied to that of an unmarried mother already being dealt with. 21 orders (Maintenance, separation, and Guardianship of Infants Act) were obtained during the year.

V. STERILITY CLINICS.

Male Sterility Clinic.

Dr. Irving-Bell.

At the two sessions per week devoted to male infertility, sexual disorders, and premarital examinations during 1949, the number of new cases seen was—143 (139 in 1948), and the total attendances numbered 351 (326 in 1948).

It was again found difficult to deal with the increasing number of old patients in need of re-examination and treatment as no increase in the number of sessions per week had been approved during the year. The percentage of cases referred from the Marriage Guidance Centre showed a further increase compared with 1948:—

Referred by—

Marriage Guidance Centre	...	30% (27% in 1948)
General Practitioners	... ..	31% (32% in 1948)
M.O. in charge Female Sterility Clinic		30% (32% in 1948)

A small number of men made appointments for themselves direct, and a few were referred from the Probation Office.

The number of men tested and found to be sterile or infertile was 42% approximately.

Towards the end of the year, an improvement was made in co-ordinating the clinical findings of both sterility clinics. The clinical record cards, hitherto separate for the two sexes, were combined as one folded card. This has lead to a better assessment of the married couple as a unit.

Since October, 1949, the analysis of semen specimens has been carried out at Frenchay Park Hospital instead of Canynge Hall, and the number of days in the week when specimens can be received reduced from three to two. If an expansion of this service generally is envisaged for the future, better provision for semen examinations will have to be made to meet this demand.

Female Sterility Clinic.

Dr. Boxall.

As during preceding years, this clinic has undertaken the investigation of cases of absolute sterility and cases of relative infertility. In addition, a number of patients with marital problems have been examined and given advice.

The total number of cases was	...	376 (1948: 286)
" " " " new cases was	...	85 (1948: 85)
" " " " old cases was	...	291 (1948: 212)

This shows a considerable increase above the numbers attending during previous years. The waiting list for new patients became so large that in the Autumn an additional session was held and the list reduced to reasonable proportions.

The number of pregnancies reported was nineteen, giving a percentage of 22.4% of the new cases seen. However, as some of these had been attending for as long as four years, this does not give any true position of the results of the work during the past year.

Owing to the large number of cases to be seen, it is difficult to arrange appointments at sufficiently frequent intervals, with the result that many patients lost interest, and did not attend for a sufficient length of time.

Of the new cases, 20 were referred by the family doctor—a big increase over last year; 24 from other clinics or health visitors; 9 by previous patients; 8 from Dr. Irving Bell's clinic or the Marriage Guidance Centre; and the remainder came of their own accord.

CLINICS.

Table I—Maternity and Child Welfare.

1948		1949
	(a) <i>Notifications—</i>	
8,485	Live Births (including 515 premature births) ...	8,328
211	Still Births ...	216
45	Confinements at Home—by Doctor ...	40
2,363	by Midwife ...	2,377
15	Premature Births admitted to Hospital (included above) ...	22
6,190	Confinements at Institutions ...	6,026
	(b) (i) <i>Municipal Midwives—</i>	
1,826	Cases completed as (a) Midwife ...	1,753
395	(b) Maternity Nurse ...	532
22,598	Nursing Visits ...	24,495
11,827	Other Visits ...	24,018
1,168	Attendances at Ante-natal Clinics ...	1,625
	(ii) <i>Pupil Midwives—</i>	
1,367	Cases completed as Midwife ...	1,268
23,751	Nursing Visits ...	21,653
10,843	Other Visits ...	7,964
1,217	Attendances at Ante-natal Clinics ...	878
	(iii) <i>Medical Students—District Midwifery—</i>	
200	Cases attended ...	112
	(c) <i>Attendances at Clinics—</i>	
	(i) <i>Municipal Ante-natal (Medical Officers Sessions).</i>	
3,137	Verrier Road ...	3,237
3,899	Bedminster ...	2,942
924	Rochester Road ...	921
749	Brislington (Water Lane) ...	1,117
2,474	Knowle West ...	2,639
4,522	North Bristol ...	4,824
1,607	Portway ...	1,403
2,684	Central ...	2,810
3,553	South Bristol ...	3,078
4,231	Southmead ...	3,458
3,294	Speedwell ...	3,363
2,796	Clifton ...	2,697
516	Frenchay ...	442
—	Dovercourt Road ...	620
—	Inns Court Road ...	418
34,386		33,969
22.7	Average per session ...	21.9
5,406	New Patients ...	5,252
	(ii) <i>Municipal Ante-natal (Midwives Sessions)—</i>	
935	Verrier Road ...	1,055
1,716	Bedminster ...	960
355	Rochester Road ...	493
13	Brislington (Water Lane) ...	240
895	Knowle West ...	883
1,619	North Bristol ...	1,520
486	Portway ...	599
287	Central ...	351
1,112	South Bristol ...	1,254
1,717	Southmead ...	1,360
997	Speedwell ...	761
237	Clifton ...	165
219	Frenchay ...	234
—	Dovercourt Road ...	337
—	Inns Court Road ...	363
10,588		10,575
13.5	Average per session ...	13.2
35	New Patients ...	100
	(iii) <i>Post natal Clinics—</i>	
858	Central ...	954
483	Bedminster ...	500
459	Speedwell ...	499
768	Southmead ...	859
152	Portway ...	175
461	Knowle ...	559
270	Clifton ...	305
299	Bristol South ...	449
326	Verrier Road ...	385
95	Frenchay ...	125
4,171		4,810
11.3	Average per session ...	13.5
2,442	New Patients ...	2,868

Maternity and Child Welfare—*continued.*

1948		1949
	(iv) <i>Consultative Ante-natal Clinics—</i>	
955	Central	885
919	Bedminster	968
448	Speedwell	459
1,511	Southmead	1,937
286	Portway	295
426	Knowle	554
642	Bristol South	560
1,076	Bristol North	1,022
581	Verrier Road	607
1	Clifton Health Centre	316
6,845		7,603
15.2	Average per session	17.6
2,265	New Patients	2,168
	(v) <i>Municipal Infant Welfare Centres—</i>	
	Mothers—	
5,853	Central	5,157
9,151	Speedwell	7,403
6,663	Southmead	6,060
3,760	Portway	3,632
8,295	Knowle West	8,432
6,260	South Bristol	6,987
5,077	Bedminster	4,809
2,466	Barton Hill	2,936
1,298	Headley Park	1,339
2,079	Moorfields	2,738
1,668	Brislington (Salisbury Road)	1,503
4,245	Clifton	3,835
5,437	North Bristol	5,474
6,035	Brynland Avenue	5,688
57	Redcross Street	—
889	Avonmouth	1,220
2,135	Brislington (Water Lane)	2,567
1,494	Rochester Road	1,437
1,141	Frenchay	1,024
2,296	Bedminster Down	2,318
5,711	Durdham Down	6,256
2,573	Eastville	2,242
2,185	Hotwells	1,696
6,615	Newry Walk	5,464
974	Redcliffe	1,134
2,148	Sea Mills	1,863
2,138	Westbury	1,873
2,286	Dovercourt Road	1,840
—	Fishponds (Guinea Lane)	1,262
—	St. George (Verrier Road)	10
—	Inns Court Road	601
—	Ullswater Road	179
100,929		98,979
32.2	Average attendance per session	33.3
	Children under 1 year—	
3,992	Central	3,418
7,273	Speedwell	5,959
4,996	Southmead	4,394
2,695	Portway	2,718
5,666	Knowle West	5,816
5,190	South Bristol	5,736
3,826	Bedminster	3,828
1,901	Barton Hill	2,470
986	Headley Park	990
1,495	Moorfields	2,367
1,449	Brislington (Salisbury Road)	1,225
3,481	Clifton	3,098
4,951	North Bristol	4,809
4,987	Brynland Avenue	4,552
1,830	Brislington (Water Lane)	2,010
33	Redcross Street	—
667	Avonmouth	857
1,272	Rochester Road	1,285
794	Frenchay	593
1,693	Bedminster Down	1,585
4,559	Durdham Down	4,523
2,232	Eastville	1,758
1,646	Hotwells	1,284
4,724	Newry Walk	3,625
729	Redcliffe	749
1,593	Sea Mills	1,349
1,617	Westbury	1,333
1,941	Dovercourt Road	1,390
—	Fishponds (Guinea Lane)	1,047
—	St. George (Verrier Road)	8
—	Inns Court Road	517
—	Ullswater Road	147
78,218		75,440
25.5	Average attendance per session	25.3

Maternity and Child Welfare—*continued.*

1948		1949
	<i>Municipal Infant Welfare Centres (contd.).—</i>	
	Children between 1 and 5 years—	
1,983	Central	1,809
2,038	Speedwell	1,563
2,104	Southmead	2,043
1,721	Portway	1,635
3,221	Knowle West	3,097
1,256	South Bristol	1,686
1,487	Bedminster	1,180
594	Barton Hill	510
394	Headley Park	447
590	Moorfields	381
377	Brislington (Salisbury Road)	395
1,016	Clifton	1,071
626	North Bristol	767
1,471	Brynland Avenue	1,582
351	Brislington (Water Lane)	742
37	Redcross Street	—
310	Avonmouth	532
257	Rochester Road	278
513	Frenchay	615
621	Bedminster Down	965
1,651	Durdham Down	2,140
369	Eastville	513
642	Hotwells	499
2,507	Newry Walk	2,316
309	Redcliffe	453
800	Sea Mills	666
669	Westbury	711
540	Dovercourt Road	703
—	Fishponds (Guinea Lane)	265
—	St. George (Verrier Road)	2
—	Inns Court Road	153
—	Ullswater Road	50
28,454		29,769
9.3	Average attendance per session	10.0
	New Patients—	
7,050	Children under 1 year	6,527
1,118	Children between 1 and 5 years	1,112
	(vi) <i>Birth Control</i> —	
374	Attendances	417
	(vii) <i>Minor Ailments</i> —	
3,111	Inspection	2,427
10,328	Treatment	6,884
2,028	New Patients—Inspected	1,577
3,313	Treated	2,818
203	Ante and Post Natal Exercises	400
73	New Patients	92
	(viii) <i>Sterility Clinic</i> —	
378	Attendances	407
105	New Patients	93
	<i>Backward Children</i> —	
184	Attendances	205
13	New Patients	18
	<i>Special Diagnostic Clinic</i> —	
1,339	Attendances	1,600
418	New Patients	351
	(d) <i>Health Visitors</i> —	
	Visits—	
1,049	Ante-natal	774
7,804	Primary	6,391
30,218	Under one year	25,589
58,345	1—5 years	58,319
1,241	Eye cases	972
62	Ophthalmia Neonatorum	32
3	Summer Diarrhoea	1
26	Neo-natal deaths	46
8,302	Other special visits	5,943
19,396	Blank visits	19,327
239	Tuberculosis	124
153	Tuberculosis—Blank visits	38
154	Unmarried mothers	365
	Sessions attended—	
10,538	Clinics	9,908
2,925	Nursery schools and classes (hours)	2,348

Maternity and Child Welfare—continued.

1948		1949
	(e) <i>Inspector of Midwives and Nursing Homes—</i>	
	Visits—	
	1. Midwives Acts—	
199	Routine	103
620	Special	510
100	2. Home Helps	—
220	3. Blank visits	160
38	4. Nursing Homes (Routine)	17
24	5. Nursing Homes (Special)	43
670	6. Midwives cases	380
	(f) <i>C.M.B. Forms—</i>	
789	A. Medical Help	664
4	B. Death	3
20	C. Stillbirth	18
14	D. Laying out the dead	15
23	E. Liability of infection	6
262	F. Artificial feeding	214

Table 2—Maternity and Child Welfare.—Welfare Department.

1948		1949
No.		No.
2,223	Cases on Register at beginning of year	2,406
417	„ added	419
234	„ removed	71
2,406	„ on Register at end of year	2,754
	Applications received—	
353	(a) Unmarried mothers	341
64	(b) Married women	78
	Affiliation Cases completed—	
42	(a) Orders obtained	37
74	(b) Agreements arranged	63
7	Maintenance Orders (Married Women)	21
229	Assisted in application for arrears on Orders	255
	Admitted to homes—	
53	(a) Expectant mothers	76
66	(b) Mothers with babies	61
	Visits—Domiciliary—	
530	(a) Ordinary	618
793	(b) After care	886
363	Blank visits	346
575	Interviewed in hospital or homes	882
£10,982	Total Receipts	£10,871
£11,016	„ Disbursements	£10,876

Table 3—Sunlight Treatment.

1948	Central Clinic							1949
	<i>Artificial sunlight—</i>							
	<i>New patients—</i>							
30	Adults	...	...	...	...	...	...	45
610	Schoolchildren	...	...	...	...	...	...	532
992	Pre-schoolchildren	...	...	...	...	...	...	552
	<i>Treatments—</i>							
341	Adults	...	...	...	...	...	...	514
6,997	Schoolchildren	...	...	...	...	...	...	5,831
11,356	Pre-schoolchildren	...	...	...	...	...	...	8,935

Table 4—Eye Clinics.

1948						1949	
New Patients	Attendances					New Patients	Attendances
1,149	7,176	School	Children	...	...	1,209	6,992
141	674	Infants	...	...	...	109	679
26	32	Adults	...	...	...	—	—
1,316	7,882					1,318	7,671

Table 5—Orthopædic Department.

1948						1949	
Patients	Attendances					Patients	Attendances
294	411	Inspections :—				1,105	456
1,145	1,685	M. & C. W.				—	1,564
136	264	School				319	—
		Chest					
1,575	2,360	Totals ...				1,424	2,020
		Treatment :—					
71	1,118	M. & C. W.				94	1,865
307	4,793	School				315	3,852
378	5,911	Totals ...				409	5,717

Table 6—Foot Clinic.

1948						1949	
Patients	Attendances					Patients	Attendances
18	33	M. & C. W.				16	49
883	4,173	School				773	3,297
901	4,206	Totals ...				789	3,346

Table 7—Ear, Nose and Throat Department.

1948						1949	
Patients	Attendances					Patients	Attendances
167	266	Inspections :—				195	254
1,709	3,198	M. & C. W.				2,165	3,583
75	112	School				—	—
		Chest					
1,951	3,576	Totals ...				2,360	3,837
35	310	Treatment :—				11	54
476	8,384	M. & C. W.				344	6,960
		School					
511	8,694	Totals ...				355	7 014

Table 8—X-Ray Department.

1948							1949		
Film	Screen	Total					Film	Screen	Total
5,354	3,756	9,110	<i>Central Health Clinic</i>				5,518	4,497	10,015
5,279	—	5,279	Chest				3,193	—	3,193
1,621	—	1,621	„ G.P.'s				1,721	—	1,721
468	—	468	Schools				515	—	515
2,886	—	2,886	M. & C. W.				2,737	—	2,737
			Others						
15,608	3,756	19,364	Totals ...				13,684	4,497	18,181

Table 9—Scabies Baths.

		Central Health Clinic		Southmead		Feeder Road		Totals	
		1948	1949	1948	1949	1948	1949	1948	1949
Children	...	773	380	198	66	13	4	984	450
Infants	...	232	144	66	45	—	—	298	189
Adults									
Females	...	504	218	70	28	—	—	574	246
Males	...	113	—	—	—	250	178	363	178
Total Attendances		1,622	742	334	139	263	182	2,219	1,063
† New Patients—									
Children	...	383	196	87	26	6	2	476	224
Infants	...	117	80	31	20	—	—	148	100
Adults									
Females	...	262	116	30	17	—	—	292	133
Males	...	61	—	—	—	130	94	191	94
Total New Patients		823	392	148	63	136	96	1,107	551

In addition to the above, 50 patients involving 88 attendances were dealt with for adjacent authorities.

† Included in "Total Attendances."

Table 10—Dispensary.

(1) Establishments served—									1949
Central Health Clinic									
Health Centres and Clinics (36)									
Hospitals and Institutions (2)									
Day Nurseries, Special Nursery									
Schools and Classes (72)									
Municipal Midwives (69)									
School first aid sets (456)									
(2) Turnover of Drugs, Dressings, etc.—									
Quantity of mixtures made	...	...	...	gallons	...	...	...	...	1,315
ointment made	...	...	...	lbs.	...	...	...	...	800
Vit. A. & D. Emulsion	...	...	...	gallons	...	...	...	...	150
Vit. A. & D. Capsules	...	...	...	caps.	...	...	...	...	167,000
Whooping Cough Vaccine	...	...	...	cc	...	...	...	...	35
A.P.T. Diph. Proph. (5 cc vials)	...	...	...	cc	...	...	...	...	8,915
Other Medicines dispensed	...	...	...	gallons	...	...	...	...	463
Lint and Cotton Wool	...	...	...	lbs.	...	...	...	...	2,849
(3) Bulk purchase of Drugs—									
				lbs.	...	...	...	...	4,979
				gallons	...	...	...	...	149
				tabs.	...	...	...	...	1,282,000

Table 11—Diphtheria Immunisation.

1948		1949
	<i>Diphtheria</i> —Number of immunisations completed at Schools, Clinics and Nurseries, General Practitioners during the year.	
6,790	Full course—Ages 0—5 years	5,243
1,242	Ages 5—15 years	869
3,792	Booster dose —15 years	4,088
11,824	Totals	10,200

2—Day Nurseries.

No. on Register 31.12.48	No.	Places Provided 31.12.49	No. added to Register	No. Re-moved from Register	No. of Deaths	No. on Register 31.12.49	Waiting List
579	13	520	496	504	—	571	456

3—Home Helps.

1948		1949
	Total cases helped—	
332	(a) Maternity	365
276	(b) Sickness	425
	Total days helped—	
3,684	(a) Maternity	4,017
3,596	(b) Sickness	5,809

2. THE NURSING SERVICES.

By Miss L. M. Bendall (Matron, External Nursing Services)

In Bristol the responsibility for supervising the work of the nursing services is delegated to a matron of the External Nursing Services. This work can broadly be divided into five main sections, namely:—the domiciliary midwifery service (1); the health visiting service (2); the home nursing service (3); the domestic help service (4); and, finally, the tutorial section and the work of certain other staff who do not conveniently fit into any of the other categories (5). The last include other public health nurses, day nursery personnel, physiotherapists, dental attendants, adult helpers and clinic assistants.

(1) DOMICILIARY MIDWIFERY SERVICE.

A full report on this service is included in the section of the report dealing with maternity and child welfare, but the necessary co-ordination of the activities of the midwives with that of health visitors, home nurses, school nurses, and domestic helps is achieved by the existence of a supervising officer. This arrangement was envisaged in the plans submitted to, and approved by, the Minister of Health in July, 1948, as the health services of Bristol.

In the same way the work of the health visiting service, home nursing, domestic helps are co-ordinated and supervised in such a way as to enable the maximum co-operation and efficiency of these services to be obtained.

(II) HEALTH VISITING SERVICE.

Under the terms of the National Health Service Act, it is the duty of every Local Health Authority to make provision in their area for the visiting of persons in their homes by Visitors, to be called "Health Visitors," for the purpose of giving advice as to the care of young children, persons suffering from illness, expectant or nursing mothers, and as to the measures necessary to prevent the spreading of infection.

In practice the health visitor has other duties in addition to those set out in the preceding paragraph, including work in ante-natal clinics, post-natal clinics, infant welfare centres, other special clinics, and nursery schools and classes.

The present authorised establishment is for 106 health visitors. The establishment at the end of 1949 was:—

54 Full-time health visitors.

5 Part-time health visitors.

14 Temporary health visitors under contract until
March, 1950.

Of these health visitors, eight are clinic sisters, one carries out full-time duties in connection with the home visitation of infectious diseases, one gives approximately half-time duties to the welfare of the blind, and one does special visiting in connection with the discharge

of premature babies from the Premature Baby Unit at Southmead Hospital. This health visitor also works a whole day a week in the Premature Baby Unit, and works one session at Professor Neale's Child Health Clinic at the Bristol Children's Hospital.

It must be remembered also, that the health visitor is also the school nurse, and a portion of her time is spent in work connected with the School Medical Service.

Actually, there is very little change in the staffing position from that of the preceding year. Appointments numbered 18, including:—

- 14 student health visitors who passed their examination in March, 1949, and became temporary health visitors under contract until March, 1950.
- 3 Full-time health visitors.
- 1 Part-time health visitor.

Resignations numbered 19, including 15 full-time health visitors and four part-time health visitors.

Causes of resignation:—

- 7 Marriage.
- 1 Death.
- 4 To take other posts.
- 4 On leaving the country.
- 1 Transfer to the Children's Department.
- 1 Domestic.
- 1 Taking up Queen's Training.

Although the scope of the health visitor's work has widened to include the family as a unit, visiting, other than in connection with Maternity and Child Welfare, has been spasmodic, and visiting in this connection has only been carried out where specific requests have been made. The number of home visits paid in 1949 was 117,926 against 140,563 the preceding year.

This decrease in the amount of home visiting can be accounted for in three ways:—

(a) *Distribution of Visits.* With the opening up of new housing estates, additional work has been imposed on the health visitor in finding the children on these districts and transferring their records. In addition, more time has been spent in travelling, particularly in certain areas where bus services were not fully established.

(b) Additional time has been spent in carrying out special surveys and investigations.

(c) Special visiting in connection with persons other than those who come within the purview of the Maternity and Child Welfare, and School Medical Departments. These visits include requests for follow-up of hospital discharges, housing problems, and the care of old people.

The health visitor has been relieved of as much routine work as possible, by the appointment of clinic nurses. An establishment of full-time clinic nurses has been maintained during 1949. An establishment of sessional clinic nurses has been built up during the year. All of these nurses are State Registered Nurses who do not possess the health visitor's certificate. They relieve the health visitor of routine work in ante-natal clinics, post-natal clinics, infant welfare centres, and minor ailment clinics and without them it would be impossible to maintain an efficient clinic service.

It will be seen that there is still an acute shortage of health visitors. This is a national problem and is accounted for by the fact that an insufficient number of health visitors are being trained. Bristol, however, is taking part in the training of health visitors as will be seen from Miss Gibb's report.

(III) THE HOME NURSING SERVICE IN 1949.

(Miss N. M. Dixon, Senior Superintendent, Bristol Home Nursing Service).

In Bristol the Home Nursing Service is provided by the Bristol District Nursing Association on behalf of the local health authority.

1. *Nursing Staff.*

In view of the general shortage of nursing personnel we have been fortunate in maintaining an adequate staff. The approximate number of nurses employed regularly throughout the year was as follows:—

Queen's Nursing Sisters	...	...	...	32
Male Nurses	...	...	...	3
State Registered Nurses	...	...	...	18
Student Queen's Nurses	...	...	...	12
Student Male Queen's Nurses	...	...	...	2
State Enrolled Assistant Nurses	...	...	...	9
Part-time State Registered Nurses	...	...	...	4
TOTAL				80

2. *Statistics.*

There was a steady increase in the demands made upon the Home Nursing Service during the year 1949. The total number of cases was 8,230 and the visits 221,058. This is an increase of 1,233 cases and 35,871 visits over those of 1948.

Home Nursing : Statistics for year ending 31st December, 1949.

Old cases on books, January 1st, 1949 ...	1,042
New cases dealt with during year 1949	7,188
Cases on books, December 31st, 1949 ...	1,202
Analysis of new cases dealt with during year : —	
Class I (employed persons)	2,988
Class II (self-employed persons) ...	141
Class III (non-employed)	4,036
Class IV (National Assistance) ...	23
	<hr/>
	7,188
	<hr/>
Total cases (old and new) visited during 1949	8,230
	<hr/>

The new cases are not easily classifiable from a disease point of view, but of those classified the bulk of them (about 70% of the total) are accounted for by diseases of the blood vessels (including 'strokes'), cardiac disease, gastro-intestinal disease and various forms of new growth.

There is no shortage of accommodation in infectious diseases hospitals and of those cases which are looked after at home few seem to need the services of a district nurse. On the other hand there is a great shortage of sanatorium beds for tuberculosis. More and more cases are remaining at home and during the year 84 tuberculous patients received nursing assistance. This involved a total of 3,900 visits. With no early prospect of an increase in the number of sanatorium beds in the area it is likely that this work will increase in the next few years.

Again, few children under the age of 15 years seem to require home nursing services as compared with the adult sections of the population and, more particularly and to an increasing extent, with persons aged 65 years or more.

In these days of lengthening waiting lists for both hospital in-patient and out-patient treatment there is an obvious need to use the home nursing services to their fullest possible extent.

3. *Night Service.*

A total of 305 visits were paid between 9 p.m. and 8.30 a.m. On November 1st, two visiting night nurses were specially appointed as it was anticipated that the number of these cases would increase during the winter months. Appreciation of this service has been expressed by doctors and patients.

4. *Training Home.*

In addition to the eight students at the Home on 31st December, 20 student Queen's Nurses successfully completed the course of training for the Roll of Queen's Nurses during the year. The Training Home and the three branch homes were fully occupied during the past twelve months.

5. *Casualty Clinic, Knowle.*

This clinic and the Home Nursing Service have benefited by the excellent co-operation which exists between the two clinic sisters and the resident and non-resident district sisters in the area.

6. *Liaison.*

The help and consideration which has been shown by the Medical Officer of Health and members of the Public Health Department has been much appreciated by our staff.

7. *Nursing Appliances.*

The demand for nursing appliances has steadily increased throughout the year. At the present time these appliances are being stored at the training home, three branch homes and in some of the Queen's Nurses' own homes where sterilisation has sometimes to be carried out under difficult circumstances.

The expansion of this service emphasises the need for a central storage depot together with adequate facilities for the sterilisation of the appliances. It was hoped that the local authority's central depot would have been established at Feeder Road by the end of the year but unfortunately this has not been possible.

Further, there is a need for making adequate arrangements for the supply and sterilisation of syringes on a large scale. District nurses are now giving many injections on behalf of general medical practitioners and a syringe service, including facilities for sterilising syringes, would assist greatly in allowing them to concentrate on their real work of district nursing instead of spending so much time on work which could be carried out by a lay person.

(IV) **ANCILLARY SERVICES.**

(i) **Domestic Help Service.**

(Miss Walton, Home Help Organiser)

It will be remembered that, in Bristol, the Domestic Help Service is divided into two complementary sections: a municipal service and a service operated by the Bristol Council of Social Service. Both these services are co-ordinated by the home help organiser of the municipal scheme.

There is, however a clear definition of duties to prevent overlapping. The majority of cases helped by the municipal service are those whose confinement takes place at home; or where a mother of young children is ill and there is no relative to care for the patient and her family. This service obviates the necessity for the removal of mothers and children to hospitals and residential nurseries or homes respectively, thus maintaining a complete family unit during the period of incapacity. The Council of Social Service, on the other hand, provides home helps for the aged and chronic sick.

The Home Help Service is an established part of the Health Services of the city and there is an ever-increasing demand for Home Helps particularly for home confinement and post-operation cases. Owing to the present great demand for hospital beds it is a daily occurrence for almoners to telephone that a post-operation patient no longer requires actual nursing and is to be discharged on the following day on condition that she is put to bed and a Home Help provided. In the same way mothers who have been confined in hospital are discharged after four or five days. The obvious inference is that a larger number of beds are freed for other less fortunate cases.

The necessity for home visitation before a Home Help is placed has proved of vital importance as the Service is still greatly misunderstood and many people who apply only require someone to do the heavy cleaning. It is necessary to stress that Home Helps are only placed in a home when there is illness and that they act as deputy housewives, with a sense of responsibility appropriate to the position, and are not just charwomen who relieve an able-bodied housewife of unpleasant jobs. Some people state that they have applied because they understand that they can get a "cheap" worker under the Council's scheme.

Types of cases assisted during the year:—

- Confinement at home.
- Pre-natal and Post-natal.
- Post-operation.
- Heart.
- Acute Rheumatism.
- Chest—pneumonia, bronchitis, pleurisy.
- Influenza, tonsilitis and similar ailments.
- Stroke.
- Accidents nursed at home.
- Nervous breakdowns.
- Gastric ulcers.
- Ulcerated legs.
- Thrombosis.
- Phlebitis.
- and miscellaneous cases.

A tribute should be paid to the Home Helps who have done excellent work and who regard the Service as a social undertaking, doing the duties as scheduled and also the "extra" help which means so much to the patient. The Service offers a new career in the Health Scheme and is attracting an excellent type of woman who feels a sense of vocation in her work.

Both services are working to full capacity and the demand for their services is increasing. Some statistical information is contained in the following tables:—

Domestic Help Service in 1949**(a) Public Health Department**

Staff	No. of Cases	Total No. of Hours
Full-time: 32	785	Worked
Part-time: 32		61,835½

Assessments made during the year			
Full Cost	Part Cost	Free	Total
219	521	79	819*

* Includes cases subsequently cancelled.

Type of Case		Hours Worked
Panel 1	Maternity	31,934½
Panel 2	Sickness of Young Children	21,289
Panel 3	Temporary Illness	8,612
All Types		61,835½

(b) Bristol Council for Social Service

Staff	No of Cases Chronic and Aged Sick	Total Hours Worked	Assessments made during the year			
			Full Cost	Part Cost	Free	Total
261 (Part-time)	552	129,152	62	160	330	552

(ii) Day Nurseries.

Very few changes have occurred among trained staff in day nurseries during the past year, and all grades have been adequately maintained.

Day Nurseries number 13.

Sisters in Charge:

- 10 State Registered Nurses.
- 2 Enrolled Assistant Nurses.
- 1 Certificated Nursery Nurse.

During the year, five State Registered Nurses have left the department. The reasons given being ill health and domestic reasons.

Two new appointments were made—one of whom was a State Registered Nurse with previous nursery experience, and the other, a health certificated nursery nurse with long experience of nursery work in Bristol.

Trained Nursery Nurses. Thirty-three in all are employed. Of these, eleven are Deputy Sisters, two of whom have been appointed during the past year; one being an up-graded nursery nurse, and the second a State Registered Sick Children's Nurse, also holding the nursery nurses diploma (Bristol trained).

Of the remaining twenty-five; eight are new appointments, and seven of these were trained in the Bristol nurseries, the eighth being an appointment from outside the city.

Nursery Assistants. There are forty-two nursery assistants, the total establishment being made up by students in training.

Students. There are eleven students in training under the Health Committee; seven in their first year, and four in their second year. There are also a number of students under the Education Committee who come into the day nurseries for periods of three months in order to gain experience with children in the 0-2 age group.

Of six students under the Health Committee who sat for the examination, five were successful in passing, there was one failure.

(iii) Clinic Staff.

Physiotherapists. There are three physiotherapists at the Central Health Clinic engaged in orthopædic work and sunlight treatment. They are fully employed and have an equal share in both branches of the work.

Dental Attendants. An establishment of twelve dental attendants has been maintained during 1949. Ten working with dentists, one engaged on orthodontics and one relief.

Adult Helpers. A full establishment of eight adult helpers have been usefully employed in 1949, primarily in the treatment of scabies and verminous head conditions. Their services are also utilized in the various other departments of the clinics.

Clinic Assistants. During 1949 there was a continued steady flow of candidates for appointment as Clinic assistants. These are girls between the ages of sixteen years and eighteen years, who intend taking up hospital training. They are employed in health centres and usefully fill in the gap between leaving school, and the age at which they are able to commence their hospital training. They work in the various departments of health centres, and also attend lectures.

Those who are appointed at the age of sixteen years, take a pre-nursing course at St. George's Grammar School. This course is recognised by the General Nursing Council, and the students are able to take Part 1 of their Preliminary State Examination before entering hospital.

Clinic assistants, who are appointed at the age of 16½ years or over, attend lectures at our own teaching centre given by the assistant tutor. These lectures include practical instruction in bed making, bandaging, temperature taking, etc.

During 1949 thirty clinic assistants were appointed, and there were thirty-one resignations.

Out of this number : —

- 23 commenced hospital training.
- 1 commenced training as a Radiographer.
- 1 commenced training as an Occupational Therapist.
- 1 ill health.
- 1 left Bristol.
- 2 marriage.
- 2 not suited to nursing.

4. DENTAL HEALTH.

By Mr. W. H. B. Stride (Senior Dental Officer).

(i) MOTHERS AND YOUNG CHILDREN.

Dental examination and treatment was carried out for expectant and nursing mothers and young children at the five main health centres during the year, and approximately 505 sessions were devoted to this side of the work. In actual practice all treatment sessions include school children as well as maternity and child welfare patients.

With the existing staff of ten dental officers it is obviously impossible to inspect and treat all the expectant mothers and pre-school children in the city, even if they were willing to attend, and as in past years, dental treatment is offered to patients selected by the doctors at ante- and post-natal clinics, and the patients sent up for treatment by the nursing staff and health visitors. Emergency treatment is available at all times. This is a matter that merits very careful consideration in that the staff has continued to carry on this priority work in spite of the vastly superior attraction of other forms of practise.

It has been interesting to try and forecast the effect of the National Health Service Act on the attendance of mothers, and, whilst during the first six months of the Act there appeared to be an increased demand for clinic treatment, this year the number of inspections has fallen from 1,532 to 1,417. This may well be due to the one factor that a busy mother will seek treatment from whoever is nearest, especially when it means several visits and the demand for clinic treatment may vary a little from year to year.

What is very noticeable is the change in the point of view of parents and grandparents (always a powerful factor) with regard to the treatment of the pre-school children. Where this was formerly regarded as a matter to be discouraged at too early an age, today we are increasingly asked for advice about the younger children, and although this does not necessarily mean that the treatment offered is accepted in every case, the value of the examination lies in the opportunity of early inspection and the certainty of eventual treatment.

A dental X-ray machine has been in use at the Central Health Clinic for some years, and increasing use is made of it for the diagnosis of difficult cases. The X-rays have been included under other operations and no separate figures were kept.

The treatment given at the health centres is complete, except for the provision of dentures, and, where these are required, patients are asked to attend a dentist of their own choice under the National Health Service.

DENTAL DEPARTMENT.

(a) Numbers provided with dental care.

	Examined		Needing Treatment		Treated		Made dentally fit
	1948	1949	1948	1949	1948	1949	1949
Expectant and nursing mothers	1,532	1,417	1,497	1,358	1,105	912	751
Children under five	1,284	2,269	1,229	2,148	1,617	2,228	2,083

(b) Forms of dental treatment provided.

Expectant and nursing mothers	Children under five		Expectant and nursing mothers	Children under five
1948			1949	
4,047	2,399	Extractions	2,961	2,983
235	—	Anæsthetics—Local	177	—
1,026	1,284	Anæsthetics—General	820	1,702
1,086	329	Fillings	1,011	317
1,046	—	Sealing or scaling and gum treatment	755	—
—	835	Silver nitrate treatment	—	1,396
209	—	Dressings	273	—

(ii) SCHOOL CHILDREN.

See School Health Report.

5. THE MENTAL HEALTH SERVICE.

By Dr. J. Hutton, (Chief Assistant Medical Officer of Health)

Introduction.

There is always the danger in preparing an annual report that repetition may lead to a general fall in interest value, but although the plan of this report must to some extent follow that of the previous year, the period under review is historically unique in being the first completed year of operation of the National Health Service Act.

The year 1948 saw the transition and re-arrangement of the work in the mental health sphere ; the year 1949 has seen the new mechanism in operation for the first time.

It is natural to expect that troubles would arise under such circumstances and the review of the measures taken to overcome them should be profitable to those who have at heart the welfare of those who suffer from afflictions of the mind.

Legislation. The powers and duties of the local health authority with regard to mental health are found in :—

The Mental Deficiency Acts, 1913 to 1938.

The Lunacy and Mental Treatment Acts, 1890 to 1930.

The National Health Service Act, 1946.

The carrying out of the powers and duties of local health authorities, contained in these statutes, is the responsibility of the City Council who have appointed the Mental Health Sub-Committee to carry out the routine business of the mental health service.

Administration

The Mental Health Sub-Committee, consisting of a chairman and five members, meets monthly as a routine measure and at additional times when the importance of business makes it necessary.

The administration of the service is carried out by officers specially designated for the purpose and approved by the Minister of Health.

Staff establishment

Medical.

Chief Assistant Medical Officer of Health as Director of the Mental Health Service	1
Assistant Medical Officers, employed part-time for certification and other duties in relation to Lunacy and Mental Deficiency	5
A Lay Officer and his staff of professional and technical workers as follows :—	

Administrative and Supervisory.

Supervising Officer	1
Assistant Supervising Officers	2
Duly Authorised Officers	4
Mental Health Visitors (1 part-time)	2
Clerks	5

Technical.

Psychologist (not yet established)	1
Nursing Sister (part-time)	1
Occupation Centre Supervisor	1
Occupation Centre Assistants (1 part-time)	6
Industrial Centre (Senior Instructor)	1
Industrial Centre (Junior Instructors)	2
Handyman-Caretaker (resident)	1
Guides (part-time)	5

Staff changes.

The combined occupational and industrial centre has been in operation for many years, obtaining recognition as a training centre for occupation centre assistants and constitutes a pool from which other local health authorities can draw the staff they need to open occupation centres elsewhere. For this reason we have, at the moment, two vacancies for staff at the centre. Moreover, the general increase in demand throughout the country for persons who are trained in this work, combined with the difficulty of obtaining suitable candidates for training may eventually lead to a deterioration in the high standard of service hitherto obtainable at this centre.

Training of staff.

As far as possible, all officers are required to provide evidence of having obtained a recognised qualification, or standard of experience appropriate to the needs of their appointment in the service.

Courses of lectures have been arranged at regular intervals throughout the year, and by this means the whole staff is made aware of the legal and technical changes which occur. It is pleasing to report upon the enthusiasm shown by the staff receiving such instruction.

It is hoped in this next year to initiate regular residential courses in conjunction with the Extra-Mural Department of the University of Bristol, both for authorised officers and occupation centre instructional staff.

Co-ordination with other authorities.

A large measure of co-operation exists between the service of the local health authority and the Regional Hospital Board, hospital management committees and other local health authorities. The advice and help of the Regional Hospital Board has been most useful in effecting the admission of patients to institutions near their own homes. Supervision of patients on licence from various institutions and under guardianship from other areas has been undertaken by the visiting staff of the mental health service of the local health authority. To preserve the link of interest that existed before the appointed day between members of committee and patients placed in institutions, several committee members have continued to visit institutions at their own expense and have expressed their satisfaction with the work being done by the medical staff of the institutions visited. Appreciation is expressed for the continued interest shown.

Voluntary organisations.

The preventive, care and after-care work, formerly undertaken in Bristol by the local regional branch of the National Association for Mental Health, has been taken over by the local health authority, about one hundred cases being transferred. No other voluntary associations have been employed although one must mention the valuable assistance afforded in the occupation centre by the Boy Scout and Girl Guide movements; Bristol Crippled Children's Society; Guild of the Handicapped; Institute for the Deaf and Dumb; and the Parent Teachers' Association.

Work in the community.

A clear understanding of the meaning of certain terms used in this work is desirable.

Mental deficiency:—Mental deficiency is a state of arrested or incomplete development of mind existing before the age of eighteen years. Although a person is mentally defective, certain circumstances must exist to render him subject to be dealt with under the Mental Deficiency Acts. In addition to being mentally defective he must be a person—

Found neglected ; abandoned ; or without visible means of support; or cruelly treated; or with respect to whom a representation has been made to the local health authority by his parent or guardian that he is in need of care and training which cannot be provided in his home; or found guilty of a criminal offence; or a person who is for the time being the subject of a report issued under the Education Act that he has been found incapable of receiving education at school; or that by reason of a disability of mind he may require supervision after leaving school.

Lunacy. This term is used with reference to the mental state of those persons who, having been of sound mind, have become temporarily or permanently of unsound mind to such a degree as to make them a danger either to themselves or to others.

There is a further class of persons of unsound mind termed "criminal lunatics," but these are outside the duties of the local health authority.

A. Under the Mental Deficiency Acts.

Ascertainment. Section 30 of the Mental Deficiency Act makes it a duty of the local health authority to ascertain what cases of mental deficiency in their area are subject to be dealt with under the Acts. To carry out this duty it is necessary that the local health authority receive the support and assistance of the many departments within the Corporation. The value of such assistance is fully recognised and appreciated.

On the 31st December, 1949, there were 1,520 mental defective persons from Bristol under care, either in institutions, under guardianship or under supervision. This figure excludes 368 children on the register of the local education authority's special schools for educationally subnormal children, who in future may become subject to be dealt with under the provisions of the Mental Deficiency Acts.

The work of the mental health service requires close contact with the homes of all cases of mental defect within the city, and when the total number of ascertained defectives is studied, the magnitude of the work will be appreciated.

Statistics. It is difficult to give mathematical expression of the visiting work done as it is clear that the efficiency of a visitor is not seen in the number of visits made, but in the quality of such visits and in the assistance given. The following are particulars of all defectives for whom provision is made :—

Particulars	Males	Females	Total
In Institutions	288	296	584
On licence from Institutions	55	34	89
Under Guardianship	19	46	65
Under Statutory supervision ...	407	329	736
Under Voluntary supervision	9	5	14
In Places of Safety	3	—	3
Other cases	22	7	29
	<hr/>	<hr/>	<hr/>
Totals 1949	807	717	1,520
	<hr/>	<hr/>	<hr/>
Totals 1948	790	711	1,501
	<hr/>	<hr/>	<hr/>

During the year this department has received notice of 90 persons considered to be suitable for action under the Mental Deficiency Acts and after investigation were dealt with as follows:—

Particulars	Males	Females	Total
Admitted to Institutions	4	3	7
Placed under Guardianship	—	—	—
In Places of Safety	2	—	2
Placed under Statutory Supervision	28	22	50
Died or removed from area	1	2	3
Action not yet taken	21	7	28
	<hr/>	<hr/>	<hr/>
	56	34	90
	<hr/>	<hr/>	<hr/>

Of these, 80 cases were notified by the Education Committee in pursuance of Section 57 (3) and (5) of the Education Act, 1944; one by parents or guardian; seven by medical practitioners and two were dealt with by the Courts.

Guardianship. It will be noticed that there have been no cases placed under guardianship during the year. This is the result of the arrangement of referring such cases dealt with for the purpose of providing monetary assistance only, to the National Assistance Board. Although such cases are dealt with for maintenance purposes by that department, the duties under the Mental Deficiency Acts still remain a matter for the mental health service and are provided for by statutory supervision.

Supervision. To prevent many defective persons from becoming subject to institutional care it has been necessary to intensify the supervision of the 736 defectives listed. The slightest easing in the home visitation is immediately reflected in an increase of those requiring custodial care. The importance of this section of the mental health service is not solely a social benefit to the patient, but its thorough operation is a real means of economy. Visiting in these cases entails home training, finding suitable employment; obtaining entry to social clubs or places of recreation; and the visitors are usually the first source of applications for assistance in family difficulties.

Marriages. There is no means at present by which the marriage of mentally defective persons can be prevented. When the marriage of a defective is about to take place, the position has to be examined with care as the rights of the defective must be respected. In extreme cases it may be found possible to declare that one of the parties to the marriage is not under proper care and control and to report such facts to a Judicial Authority, who, if it is thought proper, may make an Order for the detention of the defective in an institution.

It has yet to be proved that the marriage of mental defectives increases the mental defective population. The matter is at present receiving examination.

There have been eight marriages during the year, one male and seven females. One child has been born to married defectives and there have been two illegitimate births.

Deaths. During the year 17 mental defectives have died in the area :—

		Males	Females	Total
In Institutions	... ..	9	4	13
Under Guardianship	... ..	—	—	—
Under Supervision	... ..	2	2	4
		—	—	—
		11	6	17
		—	—	—

Provision of Training for Mental Defectives.

Occupation Centre. This centre provides day training for defective children suffering from a disability of mind of such a nature, and to such an extent, as to make them incapable of receiving education, and of whom notice has been received from the local education authority.

The requirements of mentally defective children can be provided for most satisfactorily through the training obtainable at such centres. The local health authority have no scholastic ambitions for the pupils. To aim at the impossible would be to seek failure from the outset, but the real aim of the centre is to provide a place where anti-social habits can be eradicated, where defectives can be trained so as not to become an unnecessary burden on their own homes, and where they can experience periods of happiness and friendship which they soon recognise and learn to seek. Another important point to be borne in mind is the temporary relief afforded to the parents in their constant responsibility towards the defective child.

Individual records are kept in each case, where the rate of progress and any particular attention the individual may need can be entered for further use.

Occupation Centre Curriculum. Keeping in mind that the attendees are to be trained to the limit of their capabilities, particularly in their behaviour and usefulness in their own homes, the subjects taught at the centre cover a wide field and include simple hygiene, habit and domestic training, handwork, speech training, simple art, music and dancing, and physical training. The majority of defectives on the

register are children of school age for whom training is essential. On reaching the age of 16 years, they are not automatically excluded, but if found unsuitable for remunerative employment, provision is made for them to receive continued training in the industrial centre.

Industrial Centre. This centre provides for adult training and is open to any defective for whom the local health authority is responsible. The greater number of those attending have been found to be unemployable by reason of their mental defect and are under guardianship or statutory supervision. Cases on licence from institutions become subject to "supervision" and if not in employment they are expected to attend the industrial centre.

The training provides for:— Brushmaking, carpentry, painting and decorating, gardening, physical training, rug and mat making, organised games, habit training, domestic and utility training, including care of pets. Interest in the various crafts and occupations has been well maintained and the patients have turned out a quantity of profitable work, this being evident in the successful exhibitions and sales of work held during the year.

Accommodation. The present number of pupils at the centres total 152, but the centre would be congested with only 100. It will be seen that lack of accommodation is a serious handicap and, if the centre is to give fully of its service, further accommodation must be provided soon.

Camps. The difficulties and embarrassment experienced by parents in providing a suitable holiday for defective children is a serious problem that does not always occur to one.

In July of this year, 32 adult males spent a most successful camping holiday at the Youth Organisation Committee's Camp at Brean Down, near Weston-super-Mare, their conduct being exemplary.

A party of 15 female patients, under guardianship and licence, held their annual holiday at the Free Church Hostel, Weston-super-Mare, during the last two weeks of May. Although weather conditions were unfavourable the patients thoroughly enjoyed themselves.

Scouts and Guides. The Scout Troop of 24 members and Girl Guide Company of 20 members at Marlborough House has had a most successful and enthusiastic year. This is an important side of the social life of the centre and is much enjoyed by all. Two half-days a week are given over to training purposes.

A sum of £100 from the Sunday Cinema Charity Fund towards the cost of providing uniforms and equipment has been most thankfully received.

B. Under the Lunacy and Mental Treatment Acts.

Work of Authorised Officers. These functions are carried out by special officers of the local authority, duly authorised for the purpose and working as a team with those responsible for the mental deficiency section.

Reception of persons under the Lunacy Act may now be authorised on request by the relatives, either by an Order obtained by petition, or by a Summary Reception Order, whether the patient is to be admitted privately or as a Health Service patient. If there are no relatives or friends who intend or are able to take proceedings by petition for the reception of the patient, it is the duty of the Duly Authorised Officer to give notice within three days to a Justice, if he has reasonable grounds for believing that a person within the area of the local health authority is of unsound mind, and a proper person to be sent to a mental hospital, and he is satisfied that the person in question is not under proper care and control.

Removal in urgent cases may no longer be to a workhouse but must be to a mental or general hospital or part of such hospital which has been designated by the Minister of Health for the purpose of Section 20 of the Lunacy Act. The use of this section affords patients an opportunity of medical observation (three days) before becoming subject to certification. During this period opportunities for diagnosis and curative treatment are taken, and in many cases the patient so responds as to warrant a further extension of observation, which may be ordered by the Medical Officer—Section 21 (a) (14 days); or recommendation may be made for admission to a mental hospital as a temporary patient. Many patients who partially recover during this period elect to be admitted on a voluntary basis.

Statistics. During the year the number of persons so dealt with by the Duly Authorised Officers totalled 456. Of these, 142 entered mental hospitals voluntarily, 16 temporarily, and in 144 cases no action was deemed necessary and other forms of care arranged. In only 154 cases had certification to be resorted to.

On the 31st December, 1949, there were 1,777 persons from the Bristol area under care in mental hospitals; of these 731 were male and 1,046 female. The following table shows the total number of cases and classification:—

Classification		Males	Females	Total
Certified cases	...	537	800	1,337
Voluntary cases	...	191	241	432
Temporary cases	...	3	5	8
		<hr/>	<hr/>	<hr/>
	Total	731	1,046	1,777
		<hr/>	<hr/>	<hr/>

C. Under the National Health Service Act, 1946.

After-care. This aspect of the mental health service has been of considerable benefit to many cases. Officers engaged in this work are in close co-operation with the psychiatric social workers attached to the local hospitals and clinics. By arrangement with the hospitals, patients about to be discharged are notified to the Medical Officer of Health and unless otherwise provided, after-care is arranged.

During the year the number of patients receiving after-care visitation totalled 115. Of these, 19 were ex-service personnel, referred by the Regional Hospital Board, and 96 were mental defectives discharged from Order. The majority of these patients need help in rehabilitating themselves to home conditions as well as assistance in finding suitable employment and the arrangement of out-patient supervision when required.

Mental Health Service Advisory Bureau. An important feature of the mental health service has been the setting up of an advisory bureau at Marlborough House for the purpose of affording information and advice, and of answering questions relating to all aspects of mental health. This has proved to be of very great value in the community.

Ambulance Service. The Council's ambulance service has been readily available for the transport of cases of mental illness or mental deficiency. Trained hospital staff to accompany cases have been willingly provided by arrangement with the Hospital Management Committees concerned.

6. PREVENTION OF ILLNESS, CARE AND AFTER-CARE.

(i) TUBERCULOSIS—CARE AND AFTER-CARE ARRANGEMENTS.

By C. L. Bryant (Tuberculosis Welfare Officer).

Financial Assistance. The assessment and arrangement for payment of special cash allowances in respect of cases of pulmonary tuberculosis is now the responsibility of the National Assistance Board, which acts upon recommendations of the tuberculosis medical officers.

Patients who are recommended for allowances are interviewed by the Tuberculosis Welfare Officer and issued with an official application form to forward to the Board. The necessary medical certificate being forwarded to the appropriate office of the Board.

To qualify for this special allowance, the patient must be suffering from pulmonary tuberculosis and must have incurred loss of income through having to give up work to undergo treatment recommended by the Tuberculosis Officer.

During 1949, 372 patients have been issued with application forms.

Patients suffering from other forms of tuberculosis are at liberty to apply to the National Assistance Board for an allowance at the standard rate, which is a considerably lower scale than the special allowance for pulmonary cases.

The Welfare Officer maintains close co-operation with the officers of the Board who are invariably sympathetically disposed and do the utmost, within their powers, for patients and dependants.

Extra Nourishment. The scheme enabling patients to be granted two pints of free milk per day has continued throughout the year and the daily average number of patients receiving a free allowance was 280.

The number of new grants made during the year was 258, an increase of 81 on the figure for 1948; this increase is due to some extent to the increased number of patients receiving treatment at home.

These grants are reviewed at least every three months and are subject to an income limit which corresponds to the special allowances payable by the National Assistance Board for pulmonary tuberculosis cases.

This free milk allowance is not limited to cases of pulmonary tuberculosis, but is available in all forms of tuberculosis.

Housing. By an arrangement with the Housing Committee, tuberculous persons who have applied for re-housing are supported by the Medical Officer of Health, a special investigation being made at the home in all cases, and a recommendation for additional points forwarded to the Housing Committee after consideration of the home conditions, and the medical aspects of the case.

During the year 221 cases have been dealt with under this arrangement.

Rehabilitation. Patients who are considered suitable for light or part-time employment by the Tuberculosis Officer are referred to the Ministry of Labour for registration under the Disabled Persons (Employment) Act, and with a view to being placed in suitable employment or training.

1949. *Number Referred to Ministry of Labour* =109 (72 males, 37 females).

	No. placed in full-time employment	No. placed in part-time employment	No. sent for training
Males	30	—	6 (plus 4 waiting)
Females	29	1	1
Total	59	1	7 (plus 4 waiting)

Interviews. The Welfare Officers have, during the year, interviewed approximately 2,600 persons in connection with financial assistance, free milk, employment, occupational therapy, housing and many other matters on which advice and help can be given.

The Voluntary Care Committee Workshop at Southmead Hospital was opened in September, 1949, as a Remploy Factory by the Disabled Persons (Employment) Corporation, and at the end of the year 26 disabled tuberculous persons (18 males and 8 females) were employed in cabinet making and carpentry.

This number will eventually increase to 90.

Voluntary Care Committee. This Committee, which is a voluntary body, consisting of representatives of the Local Authority, and various voluntary social, religious and medical organisations in the city, works in close co-operation with the Department of Public Health, and the Tuberculosis Welfare Officer acts as Honorary Secretary.

Assistance in kind and in cash is made to individual cases of tuberculosis where help is most needed, and a summary of the year's work follows:—

Grants made during 1949, with comparative figures for 1948.

	1949	1948
Grants of clothing	191	111
Grants of footwear	55	23
Grants of bedding	100	55
Grants of furniture, etc.	2	2
Grants of invalid chair	1	2
	<hr/>	<hr/>
	349	193
<i>Cash Allowances.</i>		
Towards cost of domestic help	9	8
Travelling Expenses	2	7
Pocket Money (patients in hospital)	2	3
Cost of spectacles	—	2
Convalescent Home Treatment	—	1
Removal Expenses	8	4
Rent arrears	2	—
Sundry	2	8
	<hr/>	<hr/>
	25	33
Loan of appliances— (bed pans, air rings, bed rests, etc.)	35	—
	<hr/>	<hr/>
	409	226
	<hr/>	<hr/>

This is not limited to the patient but is extended to dependants.

Occupational Therapy. The classes of occupational therapy commenced by the Voluntary Care Committee in 1946, have continued in charge of a full-time instructress.

Three general sessions, each of two hours, are held per week, and one session devoted to carpentry is held each week.

The average attendance at each session is nine.

The handicrafts taught include various forms of leather work, rug making, toy making, embroidery, lamp shades and light carpentry.

Patients unfit to attend classes are visited in their homes, supplied with materials and given instruction.

Kiosks. The Committee operate kiosks at Southmead, Ham Green, Frenchay and Snowdon Road Hospital, finding employment for six patients in the sale of tobacco, cigarettes, stationery and sundry other goods to patients, staff and visitors to these Hospitals.

General. The Welfare Officer and staff work in close co-operation with the National Assistance Board, the Ministries of National Insurance and Pensions, the Welfare Services Committee, Regional Hospital Board and Hospital Management Committee, and the Council of Social Service.

(ii) VENEREAL DISEASES.

As mentioned in last year's Annual Report the responsibility for the diagnosis and treatment of venereal diseases lies with the Regional Hospital Board, the epidemiology and welfare work being the responsibility of the Local Health Authority.

The following table shows the known incidence of venereal diseases in Bristol residents during the years 1940-1949.

INCIDENCE OF VENEREAL DISEASES 1940-1949
BRISTOL

Year	Total Syphilis		Early Syphilis (included in total)		Gonorrhoea		Chancroid	
	Male	Female	Male	Female	Male	Female	Male	Female
1940 ...	85	30	42	8	331	98	8	—
1941 ...	144	61	114	23	398	124	2	—
1942 ...	225	73	182	43	440	157	38	—
1943 ...	238	117	199	73	526	186	7	—
1944 ...	152	137	126	97	317	235	31	—
1945 ...	120	140	89	78	354	176	35	5
1946 ...	186	140	139	93	600	154	34	4
1947 ...	156	92	120	60	634	134	24	1
1948 ...	122	79	77	50	448	92	26	1
1949 ...	82	50	39	18	128	42	8	—

It will be seen from this table that there has been a further steep fall in the known incidence of all the specific infections. Early syphilis, which is a good index of the prevalence of venereal disease in the community, has fallen by one half in the case of males and by two-thirds in the case of females, as compared with 1948. During the year there were only two new cases of congenital syphilis in children under the age of twelve months.

The Welfare Officers, Miss G. Stinchcombe and Mr. J. Deller report as follows:—

The annual review of the Welfare Section's activities in the Venereal Diseases Department during 1949 reveals a satisfactory record and, with fullest co-operation from the medical staff, the department has maintained its customary high level.

The following analysis presents the Welfare Officer's work during the year.

	M	F
Total number of registrations during 1949	1,772	587
New cases persuaded by the Welfare Officers to attend clinic for medical examination in view of possible risk of infection	84	111
New cases who attended through other agencies	1,688	476
Number of cases on Welfare Officers' Register	801	571
Welfare Officers attendances at clinic ...	299	322
Number of new cases interviewed at the clinic	436	319
Current case interviews	586	866
In-patient interviews	341	206
Visits to defaulters	601	410
Actual number of defaulters returned ...	400	254
Consultations with voluntary bodies ...	109	155

Default from Treatment.

Quiet, constructive visiting has been carried out in an effort to meet this problem, resulting in a reduction in the number of defaulters from treatment.

Default control can be analysed as follows:—

	M	F
Number of defaulters	498	294
Number of recurrent defaulters included in above figures	197	64
Number returned	400	254
		<hr/>
Of this balance, disposal was as follows:—	98	40
		<hr/>
Transferred to other clinics	49	8
Transferred to own Doctor	4	2
Refused to attend	15	19
No trace	20	5
Carried forward to 1950	10	6
		<hr/>
	98	40

An outstanding feature during 1949 has been the number of pregnant women who have received special treatment at the nearest Ante-Natal Clinic (14). The willing co-operation of the Maternity and Child Welfare Department in this direction has been of great service and assistance to the patients concerned.

Interviews in Clinics and Hospitals.

It is impossible to assess the value of interviews given to patients in Hospital and Clinic. These cover a variety of problems essential in the restoration of a patient's confidence and desire to make a fresh start.

Marital Difficulties.

The following table will illustrate the marital problem as it affects our work in the clinic:—

No of cases interviewed	Referred to Probation Officer	Successes	Results not obtainable	Failures
		Clinic cases	Clinic cases	Clinic cases
62	5	50	4	3 Divorce proceedings instituted

Employment.

Employment was found for 29 patients and 13 were introduced to a Club or other organisation. The Ministry of Labour has again been extremely helpful, and valuable links have been made by the Welfare Officers in personal interviews with private employers.

Considerable work has been accomplished in conducting foreign seamen to their agents for the purpose of repatriation, or to enable them to re-join their ships.

Contact Tracing.

The number of contacts persuaded to attend Clinic through the personal efforts of the Welfare Officers shows an increase over the previous year, a state of affairs calling for satisfaction when it is remembered that there is now no legal compulsion which can be used in difficult and refractory cases. This aspect of the work calls for the maximum display of tact, patience and diplomacy. Regular night patrol work has been continued jointly by the Welfare Officers and a special effort made to keep the known promiscuous types in regular routine contact with the Clinics. A large amount of field work has been accomplished during the year.

Younger Age Groups

Special care is given to this group which still forms 25% of the total intake of new patients and record must be made of the co-operative attitude of most parents in endeavouring to interest the young people in Youth Clubs or other suitable organisations. In addition every effort is made to interest these young people in activities conducive to their rehabilitation.

The V.D. Voluntary Care Committee for Girls.

This body contributed the sum of £5 during the year to be used in special cases needing financial assistance.

Voluntary Bodies.

Contacts made with voluntary bodies have enabled a large number of patients to be assisted in many ways, including convalescence, accommodation, financial assistance, clothing and legal advice.

Lectures.

Lectures and talks during the year were given to various organisations.

REPORT OF THE NUTRITIONIST.

By Charlotte M. Wood, M.A.

The broad function of a nutritionist in a Public Health Department is to promote good health and prevent disease through the knowledge of nutrition. In practice the nutritionist should know what are the common faults of the diet of different groups of people and particularly which groups are most likely to be suffering from a deficient diet. If she does not know, she must be prepared to find out and for that purpose even undertake special investigations. She should show how it is possible, with present day supplies and with due attention to cost, to buy, store, prepare and cook foods so that the final meals are adequate in nutrients, well-balanced, palatable and acceptable—whether for an individual, a family, or an institution. In some cases, where the numbers are small, it is possible for the nutritionist to carry out these duties personally. In other cases she may have to impart her knowledge to persons whose work brings them in closer contact with the larger numbers concerned. At the same time she herself should keep up-to-date and acquaint herself with all the latest discoveries and knowledge on the subject.

In order to find out how I could best fulfil these functions in the Health Department I spent a certain length of time in its various sections. The following is a short summary of the work I have undertaken.

1.

(a) *Ante-natal Clinics.*

Advice on nutrition is given by Health Visitors to their patients at these clinics. I have supplemented these efforts by a series of talks at different clinics, accompanied by film strips on "The Foods you Need" and have stressed the importance of good feeding on the health of the mother and baby, both during and after pregnancy.

(b) *Infant Welfare.*

Advice on nutrition is also given at these clinics by the Health Visitors. In addition, through the co-operation of the Education Department who have provided a demonstrator, cookery demonstrations have been given regularly at some of the clinics. These demonstrations cover such subjects as weaning foods, uses of oatmeal, egg dishes, fresh vegetables, salads and the use of foods in season; also, by request from the mothers themselves, packed meals, nourishing soups, biscuits and

sponges have been shown. Exhibitions on such matters as the care and storage of milk, hygiene in the kitchen, how to choose a balanced diet and welfare foods, are shown at the same time. Both the demonstrations and the exhibitions have been planned and organised by me.

(c) *Day Nurseries.*

I have visited all the day nurseries, examined their facilities, menus, standards of cooking and costs. On the whole, although the kitchen accommodation is not always ideal, the best use is being made of it; a few minor points have had to be remedied. The children are being well fed. I found the cooking of vegetables in general, poor, and special attention has had to be given to this point. A guide has been prepared for feeding children 2-5 years, giving suggestions for meals and recipes. An estimate has been made from the Ministry of Food allowance for day nurseries and a reasonable cost for food per child per week worked out. The actual expenditure on food in the nurseries compares favourably with this calculated cost.

2. Nutrition Education.

Lectures and talks on nutrition have also been given by me to groups of people who will, in turn, spread this knowledge to the community in which they work. They are nursery nurses, district nurses, health visitors, trainees and D.P.H. students. I hope also to be able to arrange talks to Home Helps. Refresher courses are also to be given. Talks to the public include Women's Clubs such as Toc. H., Thursday Club, Mothercraft Clubs, etc.

3. Investigations.

I have just started an investigation into the effects of occupation and home responsibilities on the meals and food habits of mothers in industry and at home and am interested in finding out how the mother who goes into industry or commerce adapts herself to her additional responsibilities.

In August, to coincide with a survey being undertaken with the Ministry of Health, I have planned an investigation into the effects of various foods introduced at weaning on the subsequent health of the child.

4. Liaison with other Departments.

(a) *Education Department.* I have kept in close contact with the organiser of school meals and have given lectures to her staff; also with the supervisor of domestic subjects who has arranged the services of the demonstrator. I have access to their film library and frequently borrow film strips.

(b) *Welfare Services.* At the request of the Welfare Services Officer I visited and reported on the dietary of the Old People's Home at 100 Fishponds Road.

(c) *Children's Committee.* I am arranging through the Children's Officer to visit the residential nurseries.

5. Liaison with other Authorities.

Close contact is kept with the Dietitians working in the Ministries of Health and Food. They have recently furnished me with some valuable visual material.

Copies of reports of investigations and of Public Health programmes in nutrition are regularly received from colleagues working in America. These form interesting comparisons with our work here.

7. HEALTH AND TUTORIAL EDUCATION.

HEALTH EDUCATION.

By D. M. Evans, B.A.

(Personal Assistant to Medical Officer of Health)

1. HEALTH EDUCATION AND THE NATIONAL HEALTH SERVICE.

Throughout its history the public health service has been engaged in health education in one way or another, but, in its modern setting, it has become one of its main functions. In the past however, the public health department was chiefly concerned in creating the conditions which make a healthy life possible for all. Indeed, it has been well said that "the great sanitary advances have, in a sense, imposed good conditions upon him (the individual) without requiring his co-operation and often without his knowledge."

But today a positive attitude towards health and social living is required if our present social services, both local and national, are to be used intelligently and with a sense of responsibility. It is one of the main functions of health education to give knowledge and training that lead to a healthy way of living, and to ensure this we must see to it that we reach men and women as individuals as well as in their social institutions and gatherings. Already active in this great undertaking are the sanitary inspector, the health visitor, midwife, school nurse, district nurse, family doctor, school teacher, parents, and a host of others. At no time in our history have there been so many active health and social workers, full-time and voluntary, ready to advise and to help those in need.

There can be no escaping from the fact that the National Health Service Act, 1946, brings with it great responsibilities as well as advantages. The cost of these services might become greater than the national capacity to pay for them and the demand for some of its facilities is already greater than the supply. It is here that health education can play a significant part. Ignorance and neglect lead to the need for hospital beds and increased burden on the accommodation and costs of the hospital services. Some illness is congenital and unavoidable; but much sickness and relapse is due to the lack of knowledge and correct health habits. It is the role of the public health department to point the way and to see that the advice and training are available on as wide a scale as possible.

2. PLANS FOR CO-ORDINATING HEALTH EDUCATION.

It was with considerations such as these in mind that the City Council included in its plans for the Prevention of Illness, Care and After-Care (Section 28, National Health Service Act, 1946), submitted to and approved by the Minister of Health, a scheme for health education:—

- “ (a) Environmental hygiene and cleanliness.
- (b) Personal hygiene and cleanliness.
- (c) Special purposes, e.g., diphtheria, smallpox, tuberculosis, other infectious diseases and cancer.

(1) As part of its arrangements for the purpose of the prevention of illness, the authority proposes to continue and develop as opportunity permits a comprehensive health education programme which will provide instruction in the content, principles, methods and practice of health education to such persons as doctors, nurses, teachers, youth leaders, sanitary inspectors, industrial welfare workers, school caretakers, etc., and which will, in addition, give to the ordinary citizen of all ages appropriate information concerning individual and community health. For these purposes it is proposed to continue using the appropriate services, material and advice available from the Central Council of Health Education or from other sources. The local health authority will continue to pay an annual grant to the Central Council for Health Education.

(2) Provision for lecture rooms and apparatus will be included in the local health authority's proposals for health centres.”

To succeed health education must be planned, systematic and sustained rather than sporadic. During 1949 efforts were made to stimulate and co-ordinate the activities of the ‘natural educators’ in the field of health education:—health visitors, midwives, sanitary inspectors, school nurses, district nurses, doctors, teachers, parents, and many others, too, who fall into this category. It was decided to appoint a Personal Assistant to the Medical Officer of Health who would, in addition to other duties, include the co-ordination of health education among his activities. He would further be responsible:—

(1) for arranging for post-graduate education for the various sections in conjunction with other interested officers; (2) for arranging for publicity and exhibitions; (3) to obtain and promote the use of films, film strips, and other educational media for use by the department's officers; (4) to maintain close contact with other interested bodies such as the University, the Institute of Education, the Central Office of Information, other Corporation departments, voluntary bodies, and the Central Council of Health Education; (5) to organise such campaigns which epidemiological information and health surveys might bring to light; (6) and to maintain an overall picture of the problem of health education in a rapidly changing social framework.

This appointment was not made until November, 1949, and meantime the work of health education, which is part of the department's day-to-day activities, continued with increasing activity, both inside and outside of normal working hours.

3. A SURVEY OF THE DEPARTMENT'S HEALTH EDUCATION WORK IN 1949.

(i) **Sanitary Inspectors** are particularly active in the field of health education. Frequent lectures were given during 1949 at various clinics and infant welfare centres throughout the city covering a wide range of topics. Food and drink infections, personal and kitchen hygiene, sanitary appliances, and the storage of food, were among the subjects covered. The lectures were much appreciated by the audiences of mothers.

In addition to this, lectures are frequently given to parties of school children, and to the pre-nursing students who perform such useful services to the department. Here the subjects covered included slum clearance, refuse and sewage disposal, meat inspection, ventilation and permanent and temporary housing.

Other audiences, reached mostly by evening lectures, included audiences of domestic science teachers, school kitchen and cook supervisors (food hygiene), the Young Wives' Guild (environmental health services), grocery managers (food hygiene), and school meals staff (kitchen and personal hygiene).

Full use was made of the department's film strip projector and certain film strips to augment lectures with visual aids.

(ii) **Nutritionist.** As will be seen from her report, the nutritionist is already active in this field in efforts to promote good health and prevent disease through knowledge of nutrition. Lectures have been given in clinics, infant welfare centres and day nurseries to audiences of expectant and nursing mothers. Use is made of film strips and of a trained demonstrator to make these sessions as effective as possible. Nursery nurses, health visitors, district nurses and trainees are also given talks because of their significant role in spreading nutrition education within the community.

Outside lectures were given to women's clubs, Toc H, Thursday Club, mothercraft clubs and other bodies and the demand for these is increasing.

(iii) **V.D. Welfare Officers.**

Apart from the vital education and welfare work, done as part of their day-to-day work, the venereal disease welfare officers also undertook a number of lectures which were given outside normal working hours. Examples of these were the lectures on "Social Evils and Youth" and an address on "Venereal Disease Social Work among Women and Girls," given at Eastville Park Methodist Group by Miss G. Stinchcombe (female welfare officer). A lecture was also given on "Personal Cleanliness and Hygiene" to the Old Boys' Club, as well as lectures on "Contact Tracing and Default Control" to more technical audiences, given by Mr V. A. Deller (male welfare officer). The lectures were well received.

(iv) **School Medical Department.**

Child Guidance Clinic. A large number of lectures were given by the staff of the child guidance clinic, chiefly outside of lecture hours.

These covered a wide range of subjects and were given to a large variety of audiences. Audiences included the Parent Group at Overton Road, where Mrs. McBride spoke on "Problem Behaviour in Children," to a series of lectures on child guidance given by Dr. Barbour to health visitors and school medical officers.

School Medical Officers were also active at meetings of Parent Teachers' Associations—lecturing often in conjunction with a Central Office of Information film show.

The health educational work of health visitors, in their capacity of school nurses, and of the school medical officers in their routine clinic and school visits, needs special mention.

(v) Maternity and Child Welfare.

Most of the educational work of doctors, midwives, health visitors, and clinic sisters employed in this section of the department's work is restricted to direct contact with the mothers and young children and is of a more individual character than in most other spheres of the department's work. The importance of this initial instruction cannot be underestimated for here health education is carried out not only in the clinic but in the home. Guidance on correct feeding, clothing, hygienic conditions, infant care, etc., are all given in this way and are of paramount importance in correct habit formation.

Similarly those matrons and nursery nurses charged with the care of young children at day nurseries are vitally engaged in the formation of correct social and health habits of behaviour and this work is done diligently throughout the thirteen day nurseries of the city.

(vi) Mental Health Service.

The doctors, duly authorised officers, and the supervisors at the mental health occupation and industrial centre at Marlborough House, are charged with the educational and medical care of mental defectives of all ages. Important progress is being made in the inculcation of social habits of a healthy nature. Good work too is done through the Parent Teachers' Association whereby the parents can be given guidance and insight into the problems of their children. A pamphlet entitled "Introducing the Mental Health Services" was published during 1949 giving a brief survey of the scope of the work of the mental health section. This was published in response to the frequent requests for information from all sections of the community and from visitors overseas. A Press conference was also organised in 1949, at which representatives of national and local Press and B.B.C. were present, when the opportunity was taken of giving publicity and information on a subject about which there was too little public enlightenment. Information appeared in the Press and a short broadcast followed as a result of this and aroused considerable interest in Bristol and in adjacent areas.

(vii) Sister Tutor and Deputy.

The work of the Sister Tutor and her deputy are more fully reported in a succeeding section, but attention should be drawn to the fact that they are exceedingly active in lecturing to outside bodies both inside and outside working hours. Evening lectures have been given by

them to 'Toc H, Parent Teachers' Associations, the Red Cross and at the Friends' Meeting House. School children are conducted around the clinics as part of their education for health and citizenship.

Further to this a panel of external lecturers is maintained, who lecture on a large variety of subjects:—moral welfare, hygiene, mothercraft, and so on. Audiences reached in this way, at clinics throughout the city, include Mothers' Union, Old Age Pensioners, Co-operative Guilds, Church Fellowship Guilds, and Townswomen's Guilds.

All this is in addition to the tutorial aspects which involve the Sister Tutor and her deputy in the courses for health visitors, nursery nurses, and pre-nurses and other technical groups.

(viii) Medical Officer of Health, Deputy Medical Officer of Health and other Senior Officers.

The Medical Officer of Health and his deputy are, of course, involved in health education in all its aspects. It is they who issue information to the Press on the epidemiological aspects of the city's health either at committee or to the Press direct, when occasion demands.

Meetings and functions of all sorts, where the vital process of health education can usefully be propagated, are made full use of by the Medical Officer of Health, his deputy and other senior officers. Thus, in April, Dr. R. C. Wofinden spoke to the Chapter House of the Cathedral on "Health Services in Bristol," in November he spoke to a Social Club at the Hawthorns' Hotel on "Problem Families," and, in the same month, to School Meals representatives on "Food Poisoning."

Campaigns on health topics such as diphtheria, clean food and so on are constantly being planned and executed and this is one of the directions in which it was felt that a co-ordinating officer could play an important part.

4. THE ROLE OF A CO-ORDINATING HEALTH EDUCATION OFFICER.

It is clear from the foregoing that a co-ordinating officer can give direction to the manifold activities of the department in health education. He can maintain an overall picture of the problems arising from changes in social structure, or revealed by health surveys. He can arrange courses, lectures and exhibitions, both for the more specialised audiences of natural educators (who should be in a state of continuous re-education), and for the general public.

It will be appreciated that the audiences to be reached in this way will be many and varied—different in intellect, aptitude, interests and training. This must mean that the problem of teaching methods and of the media of education must be foremost in the scale of priorities necessarily adopted by a co-ordinating officer.

Liaison. The importance of close co-operation with other Corporation departments need only be mentioned in passing, but collaboration in many activities is always readily given and swiftly forthcoming. Likewise with such institutions as the University of Bristol—particularly the Institute of Education and the Department of Preventive

Medicine, The Central Council of Health Education, the Central Office of Information (Films Division), governmental departments, and local and national organisations of an educational and welfare nature.

Films. Full use is made of the services of the Films Division of the Central Office of Information and programmes of films on health education are used in conjunction with courses of lectures for the more specialised audiences as well as for various outside bodies. Co-operation has always been helpful and readily given and the significance of this free service should not be overlooked.

Exhibitions. More recently efforts have been made to use selected films in conjunction with the mobile exhibition service of the Central Council of Health Education. A record of the procedure adopted is worth noting as an experiment in teaching method:—

- (1) Exhibition topic received from Central Council of Health Education—"Head Lice."
- (2) Arrangements made for display at various clinics and centres.
- (3) Liaison with matron and sisters in charge of clinics as to most suitable time and date for a film showing of Central Office of Information film "Unwanted Guests" (on head lice), to coincide with infant welfare and school clinics. Attendance is stimulated by the sisters and health visitors.
- (4) Films Division of Central Office of Information contacted and at least one showing arranged at each clinic centre.
- (5) Arrangements made for a health visitor to be present in order to :—(a) point out significant details on exhibition stand, (b) introduce the film with relevant description, (c) encourage and stimulate a short discussion among the mothers present at the close of the showing.

The results of this method so far have been encouraging and it is hoped to extend its use by building up a departmental exhibition service which can be used for a less limited period. It might then be possible to reach the schools and many other audiences.

Posters and Literature. Posters are at present displayed on Empire Marketing Boards in various parts of the city and a programme is arranged to make the appeal as topical as possible. Literature is distributed free as a rule, but at a small charge in some instances, and must be regarded as an important means of propagating knowledge on vital nutritional, epidemiological and psychological matters. These are distributed at the clinics in conjunction with the health visitor.

Film Strips, Projectors and Epidiascope. Certain film strips (comparable to slides on a film which can be easily manipulated by the lecturer), are available to departmental lecturers. The department possesses a widely used film strip projector and its use is now co-ordinated and stimulated by the Personal Assistant to the Medical

Officer of Health in order to ensure that as wide an audience is reached as possible. Similarly the epidiascope is being brought more and more into lecture work. A mobile screen is available to lecturers.

It is hoped that a number of film strips, on various aspects of health education, will be made during 1950 and, whenever possible, film strips are acquired as they provide a basis around which a lecturer can conveniently build a series of lectures and provide visual aids for his or her audience.

Health Education Room—Central Clinic. During 1950 it is anticipated that a health education room will be made available in the Central Health Clinic, where the co-ordinating officer can arrange for lectures, exhibitions, film showings of relevant films, and be able to ensure that members of the department are made aware of the latest developments, both in their field and in those adjacent to them. Audiences of teachers and students of all sorts, special societies who require talks on health topics as wide apart as the problems of parenthood, breast feeding, sanitation, and kitchen hygiene—all these things can then be dealt with in a suitable environment.

In conclusion, it might be well to emphasise that there are limiting factors on the scope of what can realistically be attempted. The department is under establishment both with regard to health visitors and to sanitary inspectors, and the problem of school dentists may soon be serious. Then again, funds available for educational propaganda are limited and only a proportion of time can be directly allocated to health education. Nevertheless, much is being done and, with imaginative help, much more can still be done within the accepted limits to ensure that the education given is "planned, systematic and sustained."

TUTORIAL EDUCATION

by W. Gibb, Sister Tutor

The work of this section has progressed satisfactorily during the year, especially with regard to the Student Health Visitors.

1. Student Health Visitors.

Twenty-four students presented themselves for the examination of the Royal Sanitary Institute in March, and of these, twenty-two were successful. The number trained included the following:—six from the County of Gloucester; sixteen from the City and County of Bristol; and two were unassisted. Of the failures one was a Bristol student and the other was from Gloucester.

Twenty-four students were accepted for training in September, and these came from widely separated areas as can be seen from the following list:—

8 Bristol City and County	1 Monmouth
4 Own accord or unassisted	1 Preston
1 Derby	1 Glamorgan
5 Somerset County (Queen's Nurses)	2 Durham
1 Bath	

The number of applications received from students in Bristol requiring training was fewer, but the number was made up by applicants from other local authorities—necessitating the selection committee having to meet twice.

The Gloucestershire County authority having decided to train their own students, have reduced the practical experience available in that county from four to two weeks, the result of this being that more time has to be spent in the City with a resultant curtailment of experience in rural health work. It is, however, possible that Somerset County Council may be able to assist in giving experience in rural health work.

2. Nursery Nurses Training Course.

The results of the examination in October, 1949 were most disappointing. It appears that the standard has been raised throughout the country. The Education Committee have therefore agreed that more care will be taken in future in the selection of students.

In September, 1948, one hundred and twenty-six students commenced training. Of these, sixty-six were first year, and sixty were second year students. Fifteen withdrew from training for various reasons such as ill-health, home ties and transferring to other areas.

3. Staff.

Miss Lamont was appointed as deputy Sister Tutor in September, 1949, to assist with the training courses—following the resignation of Miss Watkins.

4. Pre-Nursing Class.

This class of eighteen to twenty students continues to meet each week for lectures in hygiene, anatomy, physiology, and practical demonstrations. The knowledge thus obtained is of great value to the students on entering hospital for training. From the teaching point of view it is difficult to carry out a set syllabus, due to the fact that students join and leave the class at irregular intervals during the year.

5. Lectures and Demonstrations at Clinics.

Talks have been arranged at all Infant Welfare Clinics. The results have been somewhat disappointing owing to the apathy of the mothers and possibly, too, due to the shortage of voluntary helpers to assist in caring for the babies during the sessions. The appointments system has curtailed the teaching at the Ante-Natal Clinics as the women usually do not return to the demonstration or lecture after their interview with the doctors.

A new venture was started in co-operation with the Education Department who arranged for demonstrations to be given on food. A second subject was introduced and demonstrations are being tried in dressmaking—so far little enthusiasm has been shown by the mothers.

6. Talks to Guilds, Clubs, etc.

These have been appreciated as much as ever and assistance has been given with observation visits to clinics, *i.e.* Domestic Science students, Social Studies students, Schools, etc. There is ample work in this teaching section of the Public Health Department for both sister tutors.

8. DIPHTHERIA IMMUNISATION AND VACCINATION

Diphtheria Immunisation.

NUMBER OF CHILDREN WHO COMPLETED A FULL COURSE OF PRIMARY IMMUNISATION IN THE AUTHORITY'S AREA (including temporary residents) IN THE SIX-MONTHS PERIOD INDICATED.

	Age at date of final injectn.		TOTAL
	Under 5	5 to 14	
Six Months ended 31st December, 1948 ...	3,390	147	3,537
Six Months ended 30th June, 1949 ...	2,667	601	3,268
Six Months ended 31st December, 1949 ...	2,576	268	2,844

Vaccination.

NUMBER OF PERSONS VACCINATED (or re-vaccinated).

	AGE AT 31st DEC., 1948 i.e., born in years ...	Under 1 1948	1 to 4 1944-47	5 to 14 1934-43	15 or over Before 1934	TOTAL
1948	Number vaccinated ...	474	38	46	123	681
	Number re-vaccinated ...	49	10	14	187	260
	AGE AT 31st DEC., 1949 i.e., born in years ...	Under 1 1949	1 to 4 1945-48	5 to 14 1935-44	15 or over Before 1935	TOTAL
1949	Number vaccinated ...	428	414	75	231	1,148
	Number re-vaccinated ...	44	41	33	372	490

9. AMBULANCE SERVICE.

ORGANISATION AND CONTROL.

The arrangements for the operation and control of the Ambulance Service which were described in the report for 1948, have continued to function smoothly, and no alteration has been effected other than the opening of an additional station from which ambulances dealing with infectious disease cases operate.

AGENCY ARRANGEMENTS.

(a) St. John Ambulance Brigade.

The negotiations in progress on the 31st December, 1948, with the St. John Ambulance Brigade were duly completed, and on the 20th February, 1949, 13 employees and 5 ambulances were transferred to the

Corporation Ambulance Service. During the period from 1st January to the date of transfer this Brigade handled 1,230 cases, and thanks are due to the officers of that Brigade for their co-operation in ensuring a smooth transfer.

(b) Women's Voluntary Services—Hospital Car Service.

This organisation continued to render excellent service during the whole year, and handled a total of 16,994 cases. An arrangement under which all calls on the Hospital Car Service, instead of passing direct from the hospitals to the W.V.S., came through Ambulance Control, was put into force early in the year, thus enabling all forms of ambulance transport to be more effectively controlled and co-ordinated with a consequent saving in mileage.

(c) Streamline Taxi Association.

During the course of the year the progressive increase in the number of personnel and vehicles at the disposal of the Service, and the increasing co-operation from the Women's Voluntary Services, enabled calls for the services of the Streamline Taxi Association to be dispensed with as from the end of June.

(d) City and Marine Ambulance Corps.

The Minister of Health's approval to the continued employment of the City and Marine Ambulance Corps, which was not included on the Council's original scheme for the provision of an Ambulance Service, terminated on the 31st March, 1949, but the continued increase in the demands made upon the Service rendered a further application to the Minister necessary, and during the year this Corps handled 4,177 cases.

(e) Avonmouth Docks Ambulance.

The negotiations in progress at the 31st December, 1948, were completed, and the ambulance maintained by the Avonmouth Docks Ambulance Committee became available to the Service as from the 14th January for use in cases of accident and sudden illness occurring at Avonmouth. There was, however, little demand for the use of this ambulance, which dealt with only 14 cases on behalf of this Service during the year.

HOSPITAL LIAISON.

The arrangements described in the last report continued during 1949 with the addition that a system of formal notification for advance bookings was established by means of which it became possible to allocate journeys on an area basis with a consequent saving in mileage, and in the number of telephone calls passing through Headquarters Control.

Concern at the continued increase in the calls being made for ambulance transport throughout the country prompted the Minister of Health to suggest that consultations should take place between hospital and ambulance authorities with a view to ensuring that the Service was not in any way being abused, but insofar as Bristol was concerned, such consultations had not reached any definite conclusions by the end of the year.

In this connection, it might not be inappropriate to mention, as it offsets the efficient operation of an Ambulance Service, that it is a matter for regret that, unlike hospitals in many other parts of the country, local hospitals seem unable to give adequate notice of the prospective discharge of patients, particularly those requiring long distance transport. Without adequate notice, the deployment of ambulances for long distance work seriously depletes the number available for calls within the City.

MUTUAL AID.

The co-operation established with adjoining Local Health Authorities has been maintained and, whenever practicable, full use is made of ambulances and cars belonging to other Authorities for the conveyance to places outside the City Boundary of patients discharged from Bristol Hospitals.

The extent to which the Ambulance Service is engaged in conveying patients on behalf of other Authorities may be gauged from Table A which shows, in addition, the number of cases handled by other Authorities on behalf of the Bristol Service.

TABLE A.
MUTUAL ASSISTANCE.

<i>Month</i>	<i>Cases handled by Other Authorities</i>		<i>Cases handled on behalf of Other Authorities</i>	
		<i>No.</i>	<i>No.</i>	<i>Mileage</i>
January	18	189	3,902
February	11	224	4,572
March	16	222	4,212
April	8	222	4,647
May	13	345	6,687
June	24	332	6,605
July	15	357	6,340
August	26	411	6,878
September	32	401	6,760
October	28	293	4,931
November	37	389	4,674
December	42	331	5,563
TOTAL		270	3,716	65,771

In the last six months of 1948 the number of cases conveyed was 1,206, involving a mileage of 24,596, it will be seen that during 1949 the number of cases rose to 3,716 and a mileage of 65,771. One interesting feature about these cases is the fact that they involve an average mileage per case of 20.4 while the average for the year on all cases is only 9.9 miles.

AMBULANCE FLEET.

At the commencement of the year there were available for the purposes of the Ambulance Service, 25 ambulances and 2 cars, of which 10 ambulances were operated by agency services. The alterations which occurred in the Council's fleet are shown in Table B.

TABLE B.

	Ambulance Service	St. John	City & Marine	TOTAL	Cars
Fleet at 31st December, 1948	15	8	2	25	2
Add: Transfer from St. John	5	—	—	5	—
New Deliveries	12	—	—	12	7
	32	8	2	42	9
Deduct: Termination of Agency Arrangements ...	—	8	—	8	—
Vehicles scrapped	6	—	—	6	1
Fleet at 31st December, 1949	26	—	2	28	8

If reference is made to the augmentation programme contained in the last annual report, it will be found that the fleet at the end of 1949 fell short of that proposed by four ambulances and three cars insofar as the Service's own vehicles are concerned, but if account is taken of the continued use of the City and Marine Ambulance Corps the deficiency of ambulances is reduced to two. This deficiency of vehicles was due primarily to the inability of suppliers to fulfil orders placed, and it is hoped that delivery of two ambulances and two cars will be effected early in 1950.

With regard to the composition of the ambulance fleet, 5 ambulances are old and uneconomical to maintain, and provision for their replacement is being made during the next year.

III.

ENVIRONMENTAL HEALTH SERVICES

- A. SANITARY CIRCUMSTANCES.
- B. SHOPS AND YOUNG PERSONS EMPLOYMENT ACTS.
- C. METEOROLOGICAL OBSERVATIONS.
- D. PUBLIC ANALYST'S REPORT.

A. SANITARY CIRCUMSTANCES, HOUSING AND INSPECTION OF FOOD.

By F. J. Redstone (Chief Sanitary Inspector)

The year under review has proved both interesting and progressive in connection with the environmental health services, and an attempt is made in this report to focus attention on the matters dealt with in an endeavour to make this city a healthier centre of industrial activity and residential rest.

The success of the environmental health services depends to a very large extent on the co-operation received from other departments of the local authority, and during 1949 this essential help and assistance has been given in full measure at all times.

It should be mentioned, however, that the results obtained have sometimes caused considerable strain on the seriously depleted staff of sanitary inspectors who have been operating some 25% under pre-war establishment during the last seven years.

The daily lot of the district sanitary inspector is cast mainly among the people in the blighted districts of the city and, although some measure of relief can be obtained by the abatement of nuisances, it is realised that a real improvement in health conditions cannot be expected until a weeding out and replanning of these areas is completed under the various schemes being considered by the city council committees.

It can, however, be claimed that few opportunities have been wasted in the efforts made to secure the best possible results under present conditions.

On other pages it will be seen that some thousands of complaints were again received by the department. It will be clear that a very high percentage of these complaints were made in connection with unsatisfactory housing conditions by the many families occupying accommodation which must be kept tolerably fit for human habitation for some time to come.

Examination successes during the year by Officers of the Section.

The following further qualifications were obtained by officers of the section during the year :—

Local Government Board Promotion Examination—R. DUMBLETON.

Royal Sanitary Institute—Certificate for Inspector of Meat and Other Foods—R. E. LAW.

Royal Sanitary Institute and Sanitary Inspector's Joint Examination Board—Sanitary Inspector's Certificate—G. A. MORGAN.

Royal Sanitary Institute—Certificate for Inspector of Meat and Other Foods—G. A. MORGAN.

Royal Sanitary Institute—Certificate for Inspector of Meat and Other Foods—O. H. PAGE.

Office Administration.

Administration has been somewhat affected by depletion in inspectorial staff. However efficient administrative arrangements may be, continual staff changes are bound to create their own difficulties.

The number of complaints received by the department has fallen somewhat below the figures for 1947 and 1948. This decrease is welcomed as an indication that the operations of the department are becoming more effective. It is clear that the more occasions on which the satisfactory abatement of nuisances is obtained, the less likelihood will there be of repeated complaints from such sources. Among the 4,972 complaints made this year there are few which have been previously dealt with at some other time.

The slight easing of pressure of work in this direction has given the department the opportunity to intensify the drive towards clean food and the necessary supervision of food premises which, in fact, will have to be extended still further. Administrative arrangements to deal with these matters are being finalised with the object of increasing the tempo of the department's activities in this sphere.

There were 34,504 visits made in connection with complaints received and 1,471 statutory notices served. Of these notices 396 were outstanding at the end of the year, the remaining 1,078 having been duly completed. This means that 75% of the work required by the department was done during the year and, in view of the many difficulties that confront owners of property and others called upon to meet these requirements, the result achieved represents satisfactory progress.

Repairs to Property in Owners' Default.

At the beginning of the year there were twenty-three properties awaiting attention and, during the current year, an additional forty-eight were referred for default action. These seventy-one properties were dealt with as follows:—

- 29 repaired by Corporation's contractors.
- 14 repaired by the owners.
- 11 ultimately considered as not suitable for default action.
- 17 remain outstanding and, of these, work is in progress in ten cases.

In addition to the work mentioned, there were six drainage jobs where works were carried out by the city engineer in the default of the owners. Apart from these drainage jobs, the remainder of the work done under the supervision of the defaults section of the department amounted to £1,400.

As was anticipated when default action was originally instituted by this department, the number of cases in which we have to intervene continues to decline. In 1949 there was an all round decrease of about 50% in the work as compared with 1948.

SANITATION, HOUSING, SHOPS ACTS, ETC. **Sanitary Inspectors.**

1948			1949			
Visits	Re-visits	Total	Visits	Re-visits	Total	
—	—	5,534	—	—	4,972	
—	—	265	—	—	214	
5,989	23,325	29,314	5,146	19,566	24,712	
15	44	59	1	1	2	
26	18	44	19	15	34	
530	1,343	1,873	15	14	29	
243	670	913	451	1,245	1,696	
51	110	161	144	561	705	
79	184	263	33	178	211	
60	183	243	88	335	423	
176	485	661	119	197	316	
47	11	58	300	699	999	
11	24	35	13	8	21	
16	31	47	10	21	31	
13	11	24	15	66	81	
41	152	193	6	13	19	
18	65	83	33	102	135	
60	128	188	13	66	79	
432	178	610	57	124	181	
1,652	1,657	3,309	355	157	512	
—	—	10	1,912	2,406	4,318	
—	—	—	—	—	20	
Complaints received			Complaints received			
Recommendations for Housing accommodation			Recommendations for Housing accommodation			
Visits—			Visits—			
Dwelling houses (P.H.)			Dwelling houses (P.H.)			
Houses let in lodgings			Houses let in lodgings			
Common lodging houses			Common lodging houses			
Foodshops—Registerable			Foodshops—Registerable			
Not registerable			Not registerable			
Other shops			Other shops			
Bakehouses			Bakehouses			
Workplaces and Offices			Workplaces and Offices			
Factories—Non-mechanical			Factories—Non-mechanical			
Mechanical			Mechanical			
Outworkers			Outworkers			
Removal of Aged Persons			Removal of Aged Persons			
Smoke observations			Smoke observations			
Offensive trades			Offensive trades			
Entertainment places			Entertainment places			
Tents, Vans and Sheds			Tents, Vans and Sheds			
Keeping of animals			Keeping of animals			
Food inspection			Food inspection			
All other matters			All other matters			
Infectious diseases			Infectious diseases			
In-tima-tion			In-tima-tion			
Statu-tory			Statu-tory			
Compliance			Compliance			
I.			I.			
S.			S.			
1,823	1,606	1,882	1,430	1,470	1,351	1,060
—	—	—	—	—	—	—
—	—	—	—	—	—	—
4	—	1	—	—	1	—
89	—	85	6	—	85	6
85	—	65	2	—	52	6
7	—	9	—	—	5	1
10	—	5	1	—	9	1
19	—	7	—	—	12	—
46	—	49	—	—	67	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
1	—	1	—	—	—	—
—	—	—	—	—	—	—
7	—	7	—	—	1	—
1	—	1	—	—	—	—
7	—	14	—	—	6	1
—	—	—	—	—	—	—
11	1	11	19	—	24	—
Notices—			Notices—			
Dwelling houses (P.H.)			Dwelling houses (P.H.)			
Houses let in lodgings			Houses let in lodgings			
Common lodging houses			Common lodging houses			
Foodshops—Registerable			Foodshops—Registerable			
Not registerable			Not registerable			
Other shops			Other shops			
Bakehouses			Bakehouses			
Workplaces and Offices			Workplaces and Offices			
Factories—Non-mechanical			Factories—Non-mechanical			
Mechanical			Mechanical			
Outworkers			Outworkers			
Removal of aged persons			Removal of aged persons			
Smoke observations ...			Smoke observations ...			
Offensive trades ...			Offensive trades ...			
Entertainment places ...			Entertainment places ...			
Tents, Vans and Sheds			Tents, Vans and Sheds			
Keeping of animals ...			Keeping of animals ...			
Food inspection ...			Food inspection ...			
All other matters ...			All other matters ...			

Remedial Action.

1948		1949
	<i>Drainage Works—</i>	
88	New drains laid	6
355	Drains repaired	412
545	Choked drains cleared	549
112	Tests made	144
	<i>Sanitary Conveniences—</i>	
266	Flushing appliances introduced	181
3	Additional closets fitted	27
2	Separate closets for sex provided	11
257	New pans fitted	194
8	Action re bathroom and geyser vent	15
6	Urinals fitted	11
667	Other works	330
85	Intervening vent space provided	65
—	Cesspools abolished	—
	<i>Water Supplies—</i>	
271	New and additional installation	47
51	Hot water installed	54
1	Wells closed	—
	<i>Other Sanitary Fittings—</i>	
137	New sinks fitted	74
1	Additional sinks provided	4
14	Wash basins provided	30
	<i>Other Works—</i>	
1,155	Roofs repaired	732
658	Dampness remedied	415
3,884	Other new and repair works	2,696
15	Yards paved and drained	1
147	Houses cleansed—Dirty	76
202	Verminous	152
2	Food store installed—cooking facilities improved	1
42	Lighting improved	34
84	Ventilation improved	61
5	Meal rooms provided	2
7	Heating provided	7
70	Exhumations	2
	<i>Keeping of Animals—</i>	
9	Removal of manure	1
1	Provision of manure receptacles	3
1	Drainage provided	—
	<i>Aged and Infirm Persons—</i>	
5	Removals—Voluntary	9
—	Court order	—
	<i>Smoke Observations—</i>	
12	Infringements—Found	17
12	Remedied	17
	<i>Noise—</i>	
6	Nuisances—Found	15
6	Abated	15
	<i>Other Nuisances—</i>	
498	Found	355
498	Abated	355

Work by Agreement under Section 275 of the Public Health Act, 1936.

In 1948, the health committee agreed in principle to the practice of considering requests from owners that works to comply with notices served by this department should be carried out by the Corporation's contractor in accordance with an agreement concluded between the town clerk and the owner, and the expenses incurred registered as a financial charge in the local land charges register. This would be cancelled as and when payment is made in accordance with the agreement.

Fourteen cases were referred to defaults section for consideration under these arrangements. Of these, seven were submitted to the health sanitary sub-committee for their approval. This was granted and orders were issued to the Corporation's contractors to carry out the necessary works.

Five cases had been completed by the end of the year at a cost of £350. Two cases were in course of completion and the remaining seven were not considered suitable for action of this nature.

II. HOUSING.

Housing conditions in this city continued to receive a great deal of attention and, in spite of the prevailing difficulties, it can be said that every effort was made to improve the conditions under which people live, although in some cases it must be admitted very little real satisfaction resulted from the action taken.

This is inevitable whilst so many houses are found to be in such a dilapidated and worn-out state. In many cases demolition is the only real answer to the problem.

It is, however, clearly recognised that every demolition order made accentuates the overcrowding and housing problem generally and for this reason great hesitation was felt when dealing with properties in this way.

At the same time it is considered that we are gradually getting towards the time when the full application of the appropriate Housing Act sections must be put into operation in fairness to all concerned. With this end in view, meetings were held and reports made drawing attention to present unsatisfactory conditions in this connection.

It is understood that some local authorities are now recommending the clearance area provisions of the Housing Act, 1936, and there certainly seems a case for Bristol to follow this example if only to a limited degree.

Housing Act, 1949.

In July of this year the above Housing Act came into operation. It contains many important provisions including the deletion from many sections of the Housing Act, 1936, of reference to "working classes." This means that the provisions of Sections 9, 11 and 12 of the latter Act can now be applied to all houses irrespective of type.

The new Act also deals with the quashing of certain demolition orders made before January, 1936, but it is not anticipated that this power, which operates for one year only, will be greatly used in Bristol.



HOUSING ACT, 1936

Dilapidated terrace house. Demolition Order made in 1949. Gutter through bedroom window had been arranged to convey roof water through room to yard.

Of more importance to Bristol, perhaps, is the amendment of the principal Act which enables the local authority to make closing orders on properties of special architectural or historical interest. This will prevent the demolition of some hundreds of houses considered to be of special merit which have been listed by the Minister of Town and Country Planning. One such closing order was made under the new powers during 1949.

Further important provisions deal with the question of grants to owners enabling them to repair and improve properties for human habitation.

Housing Survey.

Much has been heard and read of the housing drive since the end of the war, that is, the building of new houses or the conversion of single dwellings into two or more flats having as its object the provision of accommodation for families living in overcrowded or unsuitable circumstances.

There is another aspect of housing—a back room job—that of trying to keep existing properties in a reasonably habitable condition.

The aftermath of war has resulted in many restrictions and a great deal of frustration. The repair or demolition of dwellings has, consequently, been curtailed. Action of a serious nature has had to be confined to those houses whose existence could no longer be tolerated.

The department is, however, preparing its plans for the day when full scale use of the sections in the Housing Act, 1936, relative to repair, individual demolition, and clearance areas will, once more, be permitted.

In order that the department may have an up-to-date, clear, and comprehensive picture of housing conditions in Bristol and be in readiness for the easing of restrictions, a housing survey was started immediately after the end of the war. The survey will continue until the whole of the city has been covered.

Regulations made under section 5 of the Housing Act, 1936, which makes it the duty of the local authority to cause an inspection of their district to be made from time to time, especially emphasises that the worst type of property should receive prior attention. In order to comply with this requirement the four ordnance maps covering the central area of the city form the primary stage of the survey. It is on these maps that the poorest class of dwellings and the most densely built-up areas of the city are to be found. The maps represent the core of Bristol around which, in ever widening circles, the city has developed.

Each of these maps covers an area of $1\frac{1}{2}$ miles by 1 mile or 960 acres. Together, the four maps represent an area of 6 square miles. The density of housing on individual maps varies from 5,000 dwellings to over 15,000 dwellings.

The result of the field work, that is the actual inspection of dwellings, is reproduced in appropriate colours on enlarged maps.

Four main colours are used to represent the categories into which houses have been placed.

The assessment of the category of each dwelling is based on such features as locality, age, the extent of sanitary defects and disrepair, the arrangement internally and in relation to adjoining properties, and a general comparison with the other houses in that particular area.

Once an area has been surveyed much useful statistical data is compiled including the total number of dwellings, the percentage of each class of dwellings, and the number of underground rooms.

The completed maps present many differing pictures. One area emerges as a conglomeration of industry and poor type working class houses. Another map indicates that one half is manufactory, while the other half is a mixed type of housing. Yet another demonstrates that an area is entirely residential and so on.

Maps, too, bring out characteristics such as uniformity of the style of house; streets with a preponderance of the type of house which abuts on the pavement; areas which due to the dwelling density have narrow roadways and restricted yard areas; localities in which underground rooms are almost non-existent and others where such rooms predominate.

Concurrent with these housing survey maps, other maps are being prepared for the city planning officer's department as a guide to the most suitable areas for redevelopment and to assist in allocating the future use of the varying areas within the confines of the city.

Housing Acts.

1948		1949
	<i>Inspections—</i>	
—	Section 9	—
163	„ 11 and 12	120
—	Clearance area	—
	<i>Represented to Committee—</i>	
—	Section 9	—
163	„ 11 and 12	120
—	Clearance area	—
	<i>Orders Made—</i>	
55	Section 11 (demolition)	65
21	„ 12 (closing orders)	7
8	„ 11 (undertakings to repair accepted)	7
1	„ 11 (undertakings not to use accepted)	4
—	„ 11 (closing orders—Sect. 3, Housing Act, 1949)	1
	<i>Houses Repaired—</i>	
—	Section 9—Informal	—
—	„ 9—Formal	—
—	„ 9—Formal by Corporation in default	—
4	Undertakings to repair	4
1	Undertakings not to use cancelled after repair	1
6	Other repairs	3
35	Rent Certificate issued	27

<i>Section 15—Appeals against Demolition Orders</i>	1
Hearing pending	5
<i>Section 155—</i>	
Recovery of possession	1
Hearing pending	3
<i>Housing Act, 1949—Section 3—</i>	
Closing Orders	1

Tents, Vans and Sheds.

Little difficulty was experienced in this connection within the city area during the year although, in a few instances, gypsies were found to have established themselves on land without permission. The necessary measures were taken to see that their stay was indeed of a very temporary nature.

Some complaints and problems, however, arose with regard to the provision of adequate sanitary accommodation at carnival sites and representation was made to the appropriate city council committee having control of sites likely to be used in the future for this purpose.

III. INSPECTION OF MEAT AND OTHER FOODS.

Meat Inspection.

The abattoirs in the city at Gordon Road, Whitehall, and Hotwells Lairs, continued to operate as regional slaughterhouses, and a total of 114,808 carcasses were inspected including those examined at the bacon factories and various institutions. 432 tons of meat was found to be unfit for human consumption and condemned.

This year, the meat inspectors were again called upon to examine quantities of imported and home killed meat found to be affected with "bone taint" after delivery to the shops. While little can be done to remedy this condition, in so far as imported meat is concerned, additional care exercised at the abattoirs to obtain proper cooling will do much to eliminate complaints of this nature.

Statistics were supplied to the Ministry of Health in reply to a questionnaire from them regarding the amount of meat condemned as affected with tuberculosis and the amount condemned for other reasons. It may be of interest to note that of the number of beasts examined, 23.1% were affected with tuberculosis; 5.44% of the pigs examined were also affected in the same way; whereas there was only one case of tuberculosis in sheep, and that was a lamb which was found to have a tubercular infection of the peritoneum.

Cases of cysticercus bovis continued to be numerous and, during the year, 209 carcasses received the appropriate cold storage treatment in view of the parasitic infection found. This represents approximately 1% of the cattle inspected.

Inspection of Meat and Other Foods.

1948		1949
	<i>Visits—</i>	
550	Meat Markets	491
6,167	Shops	5,603
1	Cattle Markets and Railway Sidings	6
—	Fish curing premises	—
43	Sausage making premises	19
2	Cold Stores	5
85	Connection with food poisoning	455
4	Street traders	—
92	Institutions	49
1,727	Slaughterhouses	1 830
	<i>Remedial Action—</i>	
—	Slaughterhouses cleansed	—
—	Slaughterhouses rebuilt, repaired or altered	—
—	Sanitary defects, etc.	—

1948			1949	
City	Abattoir		City	Abattoir
9,433	12,107	<i>Animals examined</i>	9,472	11,558
1,074	2,638	Beasts	197	99
26,578	30,395	Calves	29,373	30,516
98	884	Sheep	53	2,446
7,380	—	Pigs	730	—
11,183	—	Pigs (Imported)	30,380	—
1	22	Bacon	—	23
266	500	Goats	300	419
5	11	<i>Carcases destroyed</i> —	4	11
26	29	Beasts	43	35
30	24	Calves	64	51
—	—	Sheep	—	—
		Pigs		
		Goats		

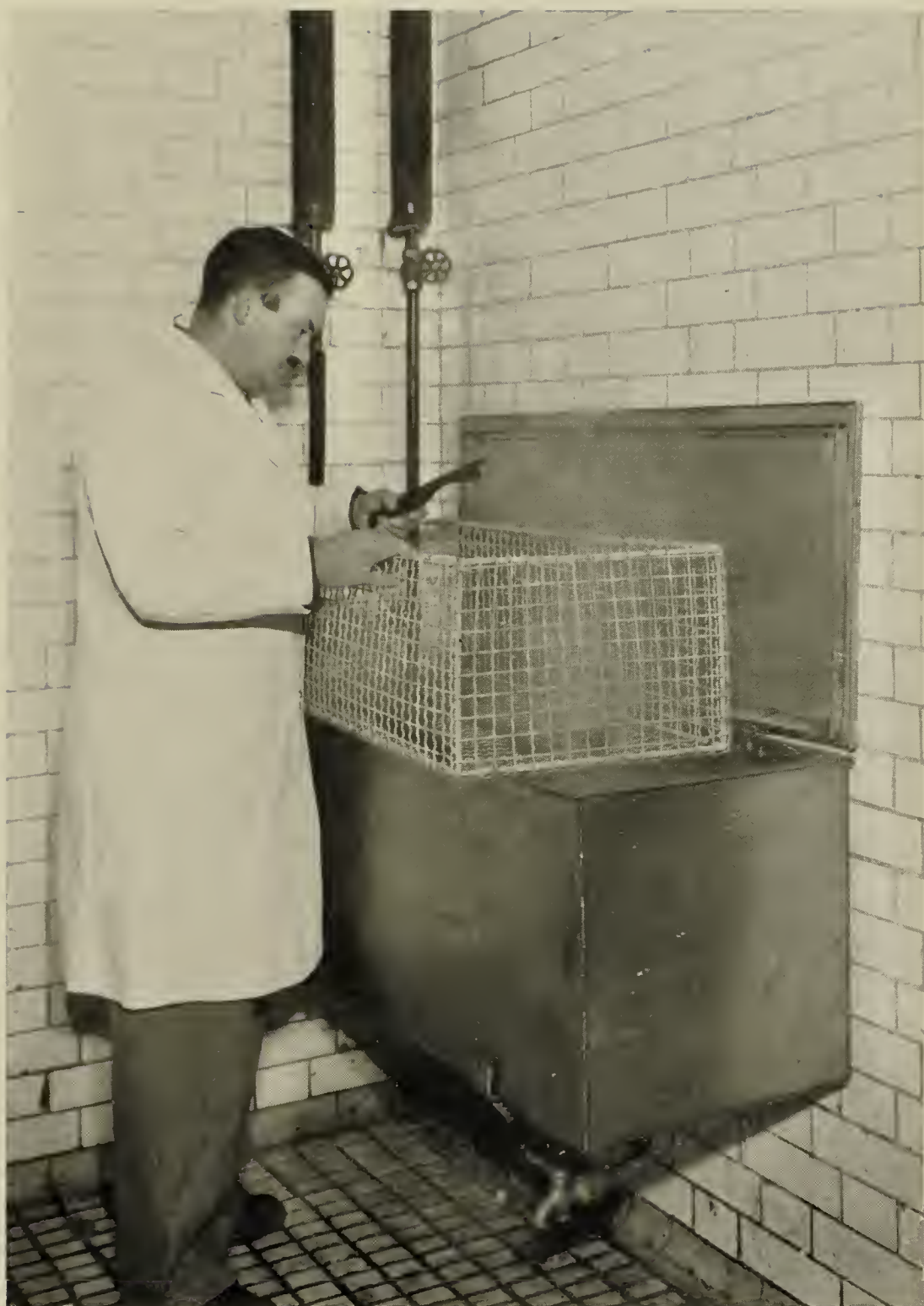
1948			1949	
Tons			Tons	
203		<i>Meat destroyed from—</i>	219	
215		Slaughterhouses and shops	213	
—		Abattoir	—	
249		Cold Stores	132	
		Fish, Poultry, Vegetables, etc.		

Public Abattoir, Whitehall.

The number of animals slaughtered at the abattoir during 1949 has been maintained at approximately the same level as in previous years. There were two notable differences, however, the number of calves declined considerably, but this was balanced by a big increase in the number of pigs slaughtered. The majority of the latter were of manufacturing quality, sows and boars, and a high percentage of this meat was exported to London.

The acute lack of lairage accommodation during the peak period of the year, which commenced rather earlier than usual, has again caused considerable difficulty when large consignments of cattle have had to be received. The paddock adjoining the abattoir has once more proved of value, the prolonged fine weather experienced in the latter part of the year having kept the ground hard, so permitting its use until quite late in the year. Owing to difficulties in finding a suitable site, progress on the scheme envisaged at the close of 1948 to provide additional lairage of a more permanent character, has been slow. Further proposals are now being prepared, however, and it is hoped that the scheme will have more tangible results in the coming year.

Some years ago it was found necessary to have the gates of the permanent cattle lairage covered over with sheet steel to prevent animals from forcing their heads through the bars and so becoming wedged there. At that time it was not considered necessary to cover the gates of pens usually occupied for sheep and calves, but during the peak period it has been unavoidable that these pens be used for cattle, with the result that the above mentioned trouble was experienced. All these pen gates have now been covered, thus enabling the entire lairage to be used for cattle as required.



Sterilizing equipment installed at Public Abattoir, Gordon Road, Whitehall.

The experimental installation of a grease trap in one of the gut room drains having proved very successful in preventing pieces of fat and other solid matter from entering the drainage system, two more similar traps were fitted to the remaining outlets from the same room. There is now no risk of the drains becoming seriously choked due to solid matter from this room as had been experienced in the past.

Another difficulty successfully overcome during the year was that caused by rain water entering and damaging the contents of two refrigerating cabinets. These machines, used for the storage of glands from which medicinal extracts are obtained, were in a somewhat exposed situation with a roof covering of a very temporary character. As it was found impossible to find a more suitable site, it was decided to reconstruct the roof in order to make it completely water-tight. This work has now been completed with satisfactory results.

It has for some time been realised that, when a badly diseased animal has been slaughtered and dressed, precautions should be taken to prevent contamination of other carcasses from knives, wipers and other utensils used by the slaughtermen. There have been no proper facilities in the past for sterilising this equipment and it was decided to provide a steriliser for this purpose. A stainless steel tank was obtained with all the necessary fittings, including a wire basket to contain the equipment to be sterilised, and this has been installed in the slaughter hall. (See photograph (2) printed with this report). Steam and hot water supplies have been connected and sterilising is carried out by boiling for a period of at least fifteen minutes. A large sink has also been fitted adjacent to the steriliser in which slaughtering equipment is washed prior to the above treatment.

Milk and Food Inspection.

Registerable Premises.

“ The preparation, or manufacture, of sausages, potted, pressed, pickled or preserved foods intended for sale ”:—

Progress is being made in the registration of premises on which the manufacture of foodstuffs included in the above title is carried out. Ice cream premises come within the same section of the law but are dealt with in a separate part of this report.

During the year, eighty-seven applications in this respect were received and considered by the committee. Fifty were approved, one was refused, and there are thirty-six awaiting decision. All these applications required visits to the premises concerned and detailed inspection has to be made prior to the cases being placed before the health committee for consideration. The department would like to express its appreciation of the manner in which most of the food traders are endeavouring to bring their premises up to the required standard. Nevertheless, it is realised that there must be many establishments in use for which no registration has yet been given and it is intended that a drive shall be made in order that a complete register of such places of manufacture, etc., shall be compiled.

Ice Cream.

Close supervision of the manufacture and sale of ice cream is being maintained and it is pleasant to be able to report that there is a very general up-raising of the hygienic standards in regard to both premises and methods. The circumstances in relation to this industry in Bristol during the year were that sixty premises were registered to manufacture, store or sell ice cream, of which fifty-one were in relation to "hot mix" preparation, the remaining nine using a "cold mix."

Of the 638 registered to store and sell only, 308 were in respect of loose ice cream and 330 related to the handling of wrapped ice cream. 253 samples of ice cream were submitted for bacteriological examination. The results are set out in table "A" and indicate an improvement when compared with the figures for 1948:

No official standard has yet been prescribed for the chemical composition of ice cream, but the Ministry of Food has put into operation a more or less provisional minimum standard of 2.5% fat in the finished product by means of allowances of 15% extra sugar to manufacturers who are prepared to observe the minimum stated. This is a very low standard of ice cream when compared with the much higher standard set by reputable firms. Even so, of the 180 samples taken on behalf of the Ministry of Food during the year for this purpose, 29 failed to reach the minimum required. The detailed figures of these samples are set out in table "B."

Iced Lollies.

Iced lollies are another point which must be mentioned while dealing with ice cream, although legislation does not permit of such stringent restrictions in their manufacture as for ice cream. Samples have been taken during the year of such lollies for both chemical and bacteriological examination, with reasonably satisfactory results, apart from several samples manufactured by a firm (outside Bristol), where zinc was present in varying quantities. The chief inspector for the area was informed and investigations made by him at the factory concerned, when it was found that a galvanised vessel had been used in the manufacture of the lollies, this practice was immediately discontinued and the vessel replaced by one of stainless steel.

It is hoped that in future legislation provision will be made for the registration of these premises. Such additional requirements would enable the department to carry out adequate supervision of both the premises used and new methods adopted for the manufacture of these confections.

Table A.

	1948				1949			
	" BRISTOL " Test		Methylene Blue		" BRISTOL " Test		Methylene Blue	
	PASSED %	Failed %	PASSED %	Failed %	PASSED %	Failed %	PASSED %	Failed %
JANUARY	72.7	27.3	72.7	27.3	100.0	—	33.3	66.6
FEBRUARY	50.0	50.0	50.0	50.0	100.0	—	75.0	25.0
MARCH	100.0	—	100.0	—	83.46	16.6	50.0	50.0
APRIL	75.0	25.0	16.7	83.3	84.9	15.1	69.6	30.4
MAY	73.5	26.4	20.8	79.2	90.4	9.6	60.8	39.2
JUNE	61.2	38.7	8.2	91.8	81.3	18.7	58.3	41.7
JULY	60.8	39.2	15.9	82.3	80.0	20.0	36.7	63.37
AUGUST	62.9	37.1	42.9	57.1	85.7	14.3	53.8	46.2
SEPTEMBER	69.2	30.8	48.1	51.9	73.7	26.3	42.2	57.8
OCTOBER	77.9	22.1	50.7	49.3	100.0	—	50.0	50.0
NOVEMBER	95.0	5.0	80.0	20.0	100.0	—	100.0	—
DECEMBER	55.6	44.4	44.4	55.6	100.0	—	87.5	12.5
OVERALL %	70.7	29.3	35.3	64.7	86.2	13.8	57.0	43.0

Table B.

Summary of Analysis of Ice Cream Samples (April-December, 1949).

	Total No. Samples taken	FAT ANALYSIS				
		Under 2.5%	2.5-5%	5-8.5%	8.5-10%	Over 10%
APRIL	22	3	6	7	6	Nil
MAY	45	11	9	16	5	4
JUNE	41	5	15	16	4	1
JULY	24	2	10	12	Nil	Nil
AUGUST	15	2	5	7	1	Nil
SEPTEMBER	15	2	4	6	3	Nil
OCTOBER	10	3	2	2	1	2
NOVEMBER	—	—	—	—	—	—
DECEMBER	8	1	—	1	5	1
TOTALS ...	180	29	51	67	25	8
Percentage of total samples in each category ...		16.2%	28.4%	27.3%	13.5%	4.5%

Milk and Dairies Regulations.

This year has been a memorable one in so far as the work of local authorities is concerned with the supervision and control of milk production. On October 1st, the Food & Drugs (Milk & Dairies) Act, 1944 and the Milk (Special Designations) Act, 1949, came into force. In addition, the Milk (Special Designation) (Pasteurised & Sterilised Milk) Regulations, 1949, and the Milk (Special Designation) (Raw Milk) Regulations, 1949, were made to fill in the frame-work set up by the two acts mentioned above.

Together with Part II of the Food and Drugs Act, 1938, these new pieces of legislation provided a complete code for clean milk.

One big change brought about by the new law was that, from the date of its operation, the supervision, registration and control of milk production passed from the orbit of the local authorities to the central body of the Ministry of Agriculture and Fisheries. In future, dairy farmers and their premises will be registered by that ministry. Distributors and dairies other than dairy farmers will still be registered by the local authorities.

The opportunity has been taken to strengthen the power of the medical officer of health in respect of the prevention of infection from milk supplies. There is no doubt that if the regulations, which consist of a detailed code for encouraging cleanliness, are enforced they should do a great deal to improve the quality of milk in this country.

The local authorities' powers of refusal or revocation of registration are not contained in the regulations but in section 22 of the 1938 Act which has been amended by the schedule to the Act of 1944.

Only time can tell whether or not the decision to transfer the powers mentioned will, in any way, be more advantageous so far as the public is concerned than was the case when the local authorities were responsible for control.

Special Designations.

Similarly, the production side of tuberculin tested and accredited milk will now be under the control of the Ministry of Agriculture & Fisheries, dealers' licences being dealt with by the local authority, as will be the case with the licensing of pasteurising and sterilising plant. It should be noted that the regulations have raised sterilised milk to the dignity of a special grade so that we now have two forms of heat treatment of milk accepted, that is, pasteurised and sterilised milks.

Amendments in the requirements of the regulations will cause considerable adjustment and, perhaps, alteration to a number of milk plants in the city. Moreover, much stricter record keeping will be necessary.

After 1950 milk pasteurised in bottles must be delivered in those bottles, and after 1954 milk otherwise pasteurised must be "bottled" at the pasteurisation plant.

General.

The Minister of Food can, in a prescribed manner, specify areas in which designated milks may be sold. This will mean the disappearance of ordinary raw milk sold in the manner now common throughout the country. No areas have as yet been specified, but it is understood that the Minister hopes to specify most urban areas within the next five years. Obviously any such action will depend very largely on the provision of sufficient pasteurising and sterilising plant to deal with the milk supplies concerned.

Dairies, Milkshops, etc.

1948	REGISTRATIONS.								1949
858	Personal								870
	Milk :—								
113	Dairies								107
95	Dairies outside City retailing within								96
601	Milkshops								617
49	Cowsheds								50
	Ice-cream :—								
2	Premises for manufacture								2
77	Manufacture, sale and storage								58
333	Storage								638
	Licences :—								
	Tuberculin Tested—								
2	To produce								2
1	To produce and bottle								1
12	To bottle and sell								13
26	To sell only								25
11	Supplementary								12
	Accredited—								
10	To produce								8
—	To produce and bottle								—
1	To bottle								1
2	To sell only								2
	Supplementary								
	Pasteurised—								
10	To produce and sell								10
58	To sell only								61
3	Supplementary								4

1948		SAMPLES.	1949	
Samples taken	Samples not complying		Samples taken	Samples not complying
193	4	Pasteurisation Test (Schools)	222	—
		Tubercle Examination (including repeats)—		
141	—	City	86	—
476	—	Somerset	316	—
628	—	Gloucestershire	492	—
8	—	Other counties	4	—
4	—	Tuberculin Tested (certified)	5	—
85	13	Tuberculin Tested	117	27
17	2	Pasteurised	2	—
114	39	Accredited	87	28
284	8	Heat-treated	367	10
343	19	Institution Tests	294	17
1,673	—	Under Food and Drugs Act (Milk)	1,210	—
436	279	Ice-cream	253	107
356	31	{Waters	348	6
483	5	{Others	2,434	—
581	—	Fæces	994	—
156	2	Plant tests	82	1
184	71	Churn or bottle rinses	112	43
—	—	Blood tests	—	—
854	—	Food & Drugs (other than milk)	974	—

Dairies, Milkshops, etc. (contd.).

1948	VISITS AND NOTICES.	1949
	<i>Visits—</i>	
1,003	Dairies	840
89	Milkshops	85
239	Cowsheds and Farms	102
272	Corporation Institutions	194
305	Schools	315
3,058	Others	4,406
1,843	Ice-cream premises	1,572
2,067	Pharmacy and Poisons	2,333
	<i>Notices—</i>	
16	Verbal	16
17	Verbal compliance	15
42	Written	29
33	Written compliance	35
	<i>Remedial Action—</i>	
	<i>Premises—</i>	
3	New built	4
25	Altered or repaired	50
4	Roofs repaired	3
28	Cleansed—Dairies	39
22	Other defects	31
10	Plants installed—sterilising	21
1	New or additional water supply installed	—
36	Hot Water facilities	158
	<i>Drainage—</i>	
1	Tests made	2
—	New drains	—
1	Repairs	11
1	Chokages cleared	1
	<i>Water Closets—</i>	
1	Flushing appliances	2
4	New pans	3
10	Other repairs and cleansing	9
—	Cesspools abolished	—
—	Cesspools provided	—
8	Other nuisances abated	3

Registrations under Milk and Dairies Regulations, 1949.

On the 1st October, 1949, there were 50 registrations as cow-keepers on the register of the department and these have been transferred to the Ministry of Agriculture & Fisheries.

On the 31st December, 1949, the registrations under the Milk & Dairies Regulations, 1949, were as follows:—

Persons registered to sell loose milk at dairies, milkshops, or on rounds	240
Persons registered to sell bottled milk only ...	484
Persons registered to purvey within the city area from outside authorities	96
	<hr/>
	820
	<hr/>

Milk (Special Designation) (Pasteurised and Sterilised Milk) Regulations, 1949.

It was decided that the applications received in October would be held over until the end of the year so that licences could be issued for 1950 and so save two applications within three months, as would otherwise have been the case in view of the new regulations.

There were ten licences granted for the processing of pasteurised milk and 61 licences to sell milk as pasteurised.

Milk (Special Designations) (Raw Milk) Regulations, 1949.

There were three licences granted during the year to produce tuberculin tested milk, fourteen to bottle and sell and twenty-five to sell only.

There were eight licences issued in respect of production of accredited milk, and one to sell.

Fish Inspection.

Improved arrangements for the routine inspection of fish arriving at the markets and before despatch to retailers were put in operation this year and some 24 tons of fish were condemned.

Generally speaking, fish traders have been very co-operative and of great assistance to the department in carrying out close supervision of fish supplies.

Other foodstuffs condemned, including vegetables, etc., amounted to 108 tons.

Markets.

The markets, generally, present serious difficulties to the department when attempting to establish proper standards of hygiene. This can be understood when it is realised that the markets have not been increased in size for something like 200 years, whereas the population has increased tenfold. There is no doubt that improvements in the facilities available at the markets must receive attention in the very near future. An example of what traders can do themselves can be seen where one market butcher, after consultation with the department, has constructed a hygienic closed stall with controlled ventilation and complying with all the requirements of the Food & Drugs Act. This is a specimen of what is possible even under present day conditions and it is hoped will encourage others to follow suit.

IV. SAMPLING OF FOOD AND DRUGS.

During the year 2,184 samples of Food and Drugs were collected and submitted to the public analyst for analysis.

The proportion of samples collected per thousand of the estimated population being 5.002.

The total number and nature of the samples collected, as well as the total number found adulterated is as set out on the table appended.

A detailed report is published in the Public Analyst's report (page 131) setting out the nature of the adulteration and the action taken in respect of the 47 samples condemned by the public analyst, but this can be summarised more briefly as follows:—

2 BEERS

Of these samples reported as adulterated, one was taken informally, and a second informal was taken at the request of the public analyst. Subsequent formal sample was taken and caution issued by town clerk.

1 CAKE MIXTURE

Condemned as unfit for human consumption and disposed of for animal feeding.

1 CIDER

Repeat sample genuine.

1 COFFEE AND CHICORY ESSENCE

Referred to Ministry of Food who considered no further action necessary.

2 GELATINE POWDERS

Of these samples reported not genuine, one was taken informally and subsequent formal repeat sample taken and referred to Ministry of Food for action.

2 SAUSAGES

One sample was taken informally, formal repeat sample followed—referred to Ministry of Food for action.

1 SAUSAGE MEAT

Sample taken informally, formal repeat sample proved genuine.

4 SOUP POWDERS

Condemned as unfit for human consumption and disposed of for animal feeding.

2 VINEGARS

One sample was taken informally, and subsequent formal sample taken. Caution issued by town clerk.

3 WHISKIES

Cases not yet heard.

6 TINCTURE OF IODINE

Of these samples reported as adulterated, 3 were taken informally and subsequent formal samples were taken and in respect of which cautions were issued by town clerk.

21 MILKS

Two instances, fine of £20 imposed in each case.

Two instances cautions were issued by town clerk.

Seven when bulked with whole consignment proved genuine.

In seven instances the samples were taken informally for test purposes and in six cases the repeat samples proved genuine and in the other it was again adulterated and is mentioned below as the case not yet heard.

One milk was abnormal and as the cow gave it.

In one case no further action was possible as repeat sample was unobtainable.

One case not yet heard.

During the year legal proceedings were taken in respect of four whiskies and one adulterated milk sample where action was still pending at the time of submitting last year's annual report.

4 WHISKIES

In two cases fines of £5 imposed, one case fine of £3 and one case dismissed under Probation of Offenders Act. 20/- costs.

1 MILK

Fine of £10 imposed and registration as purveyor of milk cancelled by magistrates.

SAMPLING.

(For details of Analysis under the Food and Drugs Act (1938) and Action taken, see Public Analyst's Report, page 131, Table 8).

Nature of Sampling	1948	1949
School Milks (Pasteurised)	193	222
Milk for Tubercle Examination:—		
City	141	86
Somerset	476	316
Gloucestershire	628	492
Other Counties	8	4
Tuberculin Tested (Certified)	4	5
Tuberculin Tested	85	117
Pasteurised	17	2
Accredited	114	87
Heat-Treated	284	367
Institutions	343	294*
Food and Drugs (Milks)	1,673	1,210
Food and Drugs (Others)	854	974
Ice Cream	436	253
Waters	356	348
Miscellaneous and Others	483	2,434
Plant Tests	156	82
Churn and Bottle rinses	184	112
Fæces	581	994
TOTAL	7,016	8,399

* Note:—Institution sampling total is made up of:—

27 Accredited milk samples
27 Tuberculin Tested milk samples
240 Pasteurised milk samples

294

VISITS.

Total Visits for	1948	1949
Inspection of Foodstuffs only	6,348	6,527
Total visits for sampling supervision of premises, infectious disease enquiries, pharmacy and poisons, etc.	8,876	9,847

Pharmacy and Poisons Act, 1933.

During the year 75 applications were received for entry in the local authority's list of persons entitled to sell Part II poisons. 516 applications were received for renewal of existing registrations to sell Part II poisons until the 30th April, 1950, making a total of 591 registrations on the register at the end of the year.

24 shop-keepers were cautioned by the town clerk for selling Part II poisons without being on the local authority's list of persons entitled to sell these articles. Of these 19 registered for the sale of Part II poisons; the remaining 5 returned their stocks to the wholesalers having decided not to sell this class of goods.

Fertilisers and Feeding Stuffs Act, 1926.

12 samples were collected and submitted to the agricultural analyst. 8 of these were reported as outside the limit of variation, but not to the prejudice of the purchaser.

Butter Factories.

There are now 11 premises retained on the register with the local authority for the purpose of blending and reworking of butter; when inspecting these premises it was observed that 4 of the factories were functioning for blending and reworking of butter; 7 were not operating, but wished to retain their registrations.

Samples of butter were taken at the premises working and in each case the results were satisfactory.

Destructive Insects and Pests Act, 1907.

Inspections of allotments were made and no trace of wort disease of potatoes was found.

Colorado Beetle.

There have been no reports or suspicious evidence of the above in the district.

Food Borne Diseases.

During the year there were eighty-three outbreaks involving 348 cases of food poisoning, together with 72 cases of dysentery. All the outbreaks were investigated and the necessary enquiries made and action taken to prevent widespread infection. Nevertheless there was a considerable increase in the number of these cases reported to the department. The factors influencing such an increase are discussed in the section dealing with the clean food campaign.

During one investigation of food poisoning where two families were involved, it was found that all had eaten brawn purchased from the same butcher's shop. A visit was paid to this firm by the sanitary inspector who found that meat products were being manufactured under unsatisfactory conditions. Subsequently the matter was reported to the health committee who authorised the institution of legal proceedings, and on the 20th December, 1949, the firm was fined £20 (maximum fine) for failing to take all reasonable steps to prevent contamination of food, and £1 for the technical offence of failing to apply for registration of premises whereon they were manufacturing food intended for sale.

It is hoped by the publicity given to such cases that food traders generally will recognise their responsibilities with regard to the necessity for registration with the local authority where foodstuffs are being prepared which come within section 14 of the Food & Drugs Act, 1938.

The causative agents of the outbreaks dealt with are summarised as follows:—

No. of Outbreaks	Organism or agent causing or suspected of causing the outbreak	No. of cases involved
47	Outbreaks of Salmonella	94
1	Hæmolytic Staphylococcus aureus organisms suspected	130
35	No organism or other agent was identified as likely to cause outbreak	124
83		348

Infectious Disease.

Fourteen cases of suspected typhoid fever and para typhoid fever were notified and the necessary investigations made. Of these there were six typhoid fever and two para typhoid fever cases confirmed.

In the outbreak, relating to typhoid fever, it was found that the source of infection had been polluted water from a stream which runs through a popular beauty spot, and the cases resulted from drinking of water from this stream. A full report on this outbreak has been published.

Food handlers were associated with thirty-nine cases of scarlet fever and one of diphtheria, all of which were visited and the necessary advice given. In some instances the contacts were stood off by their employers until such time as their private doctors issued a clearance certificate.

Enquiries were carried out in respect of 112 cases of poliomyelitis and information obtained as to contacts in the households, as well as other relevant information.

CANICOLA: Apart from the investigations of the above mentioned diseases, the department was interested in the occurrence of a case of canicola fever in a patient attending the Bristol Eye Hospital. Enquiries showed that the patient and his wife occupied a nissen hut on an ex army camp site.

Research into the disease was carried out by the veterinary and medical interests concerned and one important factor brought to light was that of the nineteen dogs at the camp site examined for infection, one proved to have positive urine.

Subsequently, a girl admitted to hospital with illness diagnosed as poliomyelitis was found to be suffering from canicola fever. She had resided near the camp in question. Later a man who lived in the same area was seriously ill and was also found to have contacted this infection.

In each case a dog was implicated which had shown symptoms of illness either before the case occurred or soon afterwards.

It is said that the incidence of this infection in the city is high, and points to the necessity for strengthening measures against contamination of human foodstuffs by animals.

Clean Food Campaign.

Publicity of a national character has drawn attention to the continued increase in the number of outbreaks of food poisoning. Reliable reports in this connection lend substance to the view held in many quarters that there is a deterioration in the handling of food. It is suggested that some of this may be due to the present shortage of cleansing materials and equipment. Our own experience has been that it is not so much the shortage of material, etc., but the lack of provision of staff and time to the task of cleaning which is responsible for much of the dirtiness and unsatisfactory conditions which prevail in quite a number of food shops.

There is no doubt that public conscience with regard to clean food is being aroused by the many articles that are being written on the lack of hygiene in food handling. The attitude of the public will, in the end, be the most potent weapon from which health departments will receive assistance in their attempts to raise the standard of hygiene in such premises.

It is appreciated that the development of communal feeding and the increase of people at risk accounts for a proportion of the additional food poisoning cases reported but, even allowing for this factor, it is alarming, in these modern days, to find that food stuffs so frequently figure as the vehicle conveying infection.

In addition to the visits made by inspectors, which are always of an advisory character in the first place, the department has arranged a series of lectures based on the use of film strips on:—

- (a) What food infections are.
- (b) The food handlers' part.
- (c) Hygiene in the kitchen.

The response of the food traders, generally, has been exceptionally good and many instances can be quoted where marked improvement has resulted.

Future progress seems to be bound up in the extension of the use of pre-packed foods, refrigerated counters, perspex screens for exposed foods on sale, and strict observance and enforcement of regulations based on the new model food byelaws. The latter will not become operative in Bristol until 1950, but it is of great interest to note that these byelaws will enable local authorities to take action against the actual employee found to be contravening the rules, as well as, or instead of, the employer, who may or may not be at fault.

Another innovation, which demonstrates the importance of this subject, is that as from January 1st returns of food poisoning outbreaks have to be included in the medical officer of health's statistical returns to the registrar general. Further, a summary of food poisoning outbreaks has to be supplied to the ministry of health, together with details of the individual outbreaks. It is clear that the collation of information of this nature should provide not only the complete picture of the situation in the country as a whole, but may also indicate the different sources and causes of the infection which will enable the central body to afford local authorities with up to date guidance and information on the trends of these outbreaks.

CITY WATER SUPPLY.

Particulars required by Ministry of Health Circular 2/50 (England).

<p>1. Whether the water supply of the area and its several parts has been satisfactory.</p> <p>(a) in quality.</p> <p>(b) in quantity.</p>	<p>YES.</p>
<p>2. Where there is a piped supply, whether bacteriological examinations were made of the raw water and, where treatment is installed, of the water going into supply; if so, how many and the results obtained; the results of any chemical analysis.</p>	<p>Raw waters examined bacteriologically before treatment by Bristol Water Works Company.</p> <p>Raw water at Barrow before filtration—weekly.</p> <p>Raw water at Chelvey before chlorination—twice weekly—when pumping.</p> <p>Raw water at Litton before chlorination—fortnightly.</p> <p>After treatment found satisfactory.</p>
<p>3. Where the waters are liable to have plumbo-solvent action, the facts as to contamination by lead, including precautions taken and number and result of analysis.</p>	<p>NOT LIABLE.</p> <p>Water is not liable to lead contamination and no analyses were done.</p>
<p>4. Action in respect of any form of contamination.</p>	<p>On finding any trace of faecal pollution the matter is taken up with the appropriate authority immediately when further samples are taken until satisfactory results are obtained.</p> <p>Contamination after treatment has been negligible.</p>
<p>5. Particulars of the proportion of dwelling houses and the proportion of the population supplied from public water mains.</p> <p>(a) direct to houses.</p> <p>(b) by means of standpipes.</p>	<p>(a) The whole of the population in the Bristol area is supplied by public water mains direct to houses with the exception of a few isolated premises in the rural suburbs when the supply is free from private wells and subject to a form of chlorination. These are gradually being reduced as mains supply is laid on.</p> <p>(b) Negligible.</p>

V. ATMOSPHERIC POLLUTION: OFFENSIVE TRADES AND NUISANCES.

Atmospheric Pollution.

The health committee paid special attention to the general condition of the atmosphere in this city during the year under review and played a full part in national efforts being made towards the establishment of cleaner atmospheric conditions.

A number of complaints were received in connection with smoke, grit and coal dust nuisances and in each case the visits made and discussions held, resulted in abatement of nuisance.

With the approval of the health committee, the chief sanitary inspector accepted membership of the recently formed Fuel Education Committee of the Ministry of Fuel and Power. Meetings of this committee were attended and considerable progress was made towards the more adequate dissemination of fuel efficiency knowledge among works executives, managers and boiler firemen.

A communication was received from the Ministry of Health indicating that the Minister proposed making an order under the Alkali, etc., Works Regulation Act, 1906, extending the list of noxious or offensive gases which would be subject to control under the provisions of this Act. The health committee gave the fullest possible support to the Ministry in the measures necessary to ensure the best possible means being employed to control the emission of noxious or offensive gases referred to in the communication.

The annual meeting of the Bristol and District Regional Smoke Abatement Council was addressed by Mr. Donald V. H. Smith on the contribution of collective heating schemes in the prevention of atmospheric pollution. This address proved of special interest to the Bristol area delegates in view of the proposals being considered by the city council for a district heating scheme.

The annual conference of the National Smoke Abatement Society held at Harrogate was attended by nearly 450 members and delegates. The Bristol representatives were Councillor A. J. M. Wright and the chief sanitary inspector. This conference was addressed by Mr. Arthur Blenkinsop, M.P., Parliamentary Secretary of the Ministry of Health, who expressed the view that the best results in the whole problem of industrial smoke nuisance would be achieved by effective co-operation between local authorities and industry because better fuel practice is in the interests of both parties. It is an economy to industry and it can be a great contribution to the better health and welfare of the community.

With regard to local conditions, it can be said that a considerable amount of interest is now paid to the need for clean air and that atmospheric conditions in this city could be much worse. We have, for instance, made much progress since a poet in the eighteenth century referred to Bristol's glass-making industry in the following terms:—

“ Whose sooty stench the earth and sky annoys
And natures blooming verdure half destroys.”

Offensive Trades.

Some complaints were received during the year regarding offensive smells from the special trades situated in the St. Philip's Marsh area, and it is pleasing to record that the nuisance created was due only to a temporary breakdown in plant and not to inefficient management.

Whilst it can be said that the city's offensive trades premises are managed with the minimum nuisance, it is considered necessary that a full survey of the premises and operations carried on in each case should be made and the health committee have given instructions for this to be done at an early date, so that a clear picture of the general problem may be available.

Noise Nuisances.

Five petitions and complaints were received from residents of property adjoining premises used as motor coach garages and certain large bakeries operating at night.

In addition, the ever present problem of noise from low flying aircraft received attention. In each case it can be said that following many night and early morning visits by the sanitary inspectors, some measure of improvement was effected.

Rubbish Deposits on Void Sites.

The chief sanitary inspector reported to the health committee that many complaints were received by the health department regarding deposits of rubbish on the void sites throughout the city. It was explained that although appeals had been made to the public through the press and by display of warning notices, little real improvement had been noticed during the past few years.

It having been recommended that further measures should be taken to deal with this matter, the chairman of the sanitary sub-committee and the chief sanitary inspector met and discussed the problem with the transport and cleansing committee who readily agreed to set up arrangements for removal of the noxious rubbish found on void sites from time to time.

Public Conveniences.

Following complaints raised at the health committee regarding the condition of certain sanitary conveniences, discussion took place with the appropriate corporation departments and improvements were carried out. Representations were also received about the lack of sanitary conveniences at Anchor Road which is extensively used as a site for the arrival and departure of motor coaches. In this case, plans were prepared by the city engineer for the provision of suitably sited accommodation.

VI. RAT DESTRUCTION : DISINFECTION AND DISINFESTATION.

Rat Destruction.

The standard of hygiene of dwellings and business premises falls short of present day levels if pest infestations are not under satisfactory control. Our clean food drive would be incomplete if consideration were not given to this aspect of sanitation. With this in mind every assistance has been made available to persons or firms with a pest

problem. Among the premises which received special attention were civic restaurants, school kitchens and large food premises, and others, including offensive trades. Moreover, arrangements were completed with Bristol United Hospitals Board for the inspection and treatment of all premises under their control. Satisfaction has been expressed regarding the manner in which the services have been carried out.

In addition to these schemes, constant inspections and treatment have been maintained in regard to clinics, nurseries, schools, corporation tips, river banks, pig food processing plants and similar premises.

Sewer maintenance treatments in accordance with the methods of the Ministry of Agriculture and Fisheries were applied on two occasions, and the large number of poison baits taken indicate both the need for the treatment and the success achieved on both occasions.

Following the appointment of two investigators for the purpose of intensifying the block control methods of rodent repression 15,642 visits and inspections were made between April 25th and the end of the year. These visits relate to 13,329 dwellings and 2,313 business premises. Other details of this work are as follows:—

No. of Complaints of Rats or Mice		Dealt with by Corporation	Dealt with by Occupier	No action required	Out-standing
2,143		1,700	105	242	96
Type of Infestation			Bodies Recovered from Premises		
Rats	Mice		Rats	Mice	
1,577	566		2,508	928	
Dock Area:—					
Bodies Recovered:		Rattus rattus.	Rattus norvegicus.	Mice	
		1,140	949	107	

Generally speaking, the Avonmouth, and Portishead and Bristol docks areas gave little trouble and satisfaction may be expressed with the development of the block control system operating. Several large mills and commercial undertakings situated at the docks are taking up the service provided by the Bristol Corporation.

It has been stated that if the loss caused by the depredations of rodents could be eliminated, Marshal Aid would be unnecessary! Such a statement indicates the tremendous economic importance of rodent repression.

The interest displayed in these activities by the officials of the Port of Bristol Authority has been of great assistance and is very much appreciated.

Rat Repression.

1948					1949			
Business Houses	Houses	Other	Total		Business Houses	Houses	Other	Total
11	23	2	36	Complaints incompletely dealt with b/forwd. ...	77	56	40	173
661	1,345	186	2,192	Complaints received ...	678	1,255	210	2,143
672	1,368	188	2,228		755	1,311	250	2,316
				Remedial action—				
				Infestation cleared—				
516	920	133	1,569	By Corporation ...	567	932	201	1,700
12	40	—	52	By occupiers ...	28	76	1	105
67	352	15	434	No action required ...	28	209	5	242
77	56	40	173	Incompletion at end of year carried forward ...	132	94	43	269
672	1,368	188	2,228		755	1,311	250	2,316
Avon-mouth	Bristol	Portis-head	Total		Avon-mouth	Bristol	Portis-head	Total
				Rats recovered—				
				Docks, quays, wharves, etc.—				
279	28	6	313	Brown ...	1,104	10	24	1,138
419	15	8	442	Black ...	886	12	51	949
—	—	—	—	Species not recorded ...	—	—	—	—
385	10	7	402	Examined for plague ...	996	11	49	1,056
136	8	9	153	Mice ...	105	10	11	126
			294	City—				
			370	Brown ...				1,443
			—	Black ...				1,065
			56	Species not recorded ...				—
			717	Examined for plague ...				60
				Mice ...				928

Disinfection and Disinfestation.

The work carried out by the disinfection service is mainly of a routine character. The measures taken to prevent the spread of infectious disease and to deal with verminous conditions are, however, an important part of the environmental health services and efforts have been made during the year to increase efficiency by a review of the systems of operation and equipment used.

The total number of jobs carried out by the staff at the Feeder Road disinfecting station was 5,863 and the following indicates generally the type of work performed:—

Total number of articles disinfected or disinfested ...	124,250
Total number of premises disinfected or disinfested ...	4,536
Total number of articles collected and destroyed ...	1,300
Total number of baths (verminous persons) ...	142

Considerable trouble was experienced in the city from plagues of cluster flies and the department dealt with 53 such cases, the pests being found mostly in roof spaces and attic rooms.

Unusual infestation occurred in a new school building during August. Following an urgent request for help, it was found that the premises were infested with a vegetable feeding mite which had forsaken the very dry vegetation on the land adjoining the new school building. This trouble was overcome by spraying with preparation which included D.D.T.

The two large steam disinfecting machines are in continuous use throughout the year but increased facilities will be needed to deal with materials provided under the National Health Service scheme. With this in view, the health committee obtained a small disinfecting machine which is to be installed in a small extension at the disinfecting station.

During July the sanitary sub-committee made a visit of inspection to the disinfecting station.

Disinfections, Drain Tests, etc.

1948		1949
3,999	Premises disinfected	4,043
98,152	Articles disinfected	115,263
950	Articles disinfested	8,989
713	Articles destroyed	1,300
—	Vermin repression—by spraying	493
159	by fumigation	—
3	Vermin baths—Men	142
387	Women	2
191	Disinfections for Hospitals and Nursing Homes	369
—	Public Library books collected and disinfected	282
42,149	Private Library books collected and disinfected	130
4,417 lbs.	Foodstuffs, etc., destroyed—Canned food ...	37,527
692	Other foodstuffs ...	7,139 lbs.
127	Premises visited	448
561	Drain tests	175
	Other work	616

Noxious Weeds.

Prior to the 14th June last year, county borough councils had no real statutory power enabling them to deal with nuisance from noxious weeds. Since then the Injurious Weeds (Delegation to County Borough Councils) Order 1948 has come into operation. This was too late to be of much practical value that year, but during 1949 county borough councils have been putting into practice the powers delegated to them. These powers enable the council to serve notices upon occupiers of non-agricultural land in their area requiring the cutting down or destruction of specified weeds, and to act in the occupiers' default and recover the cost of any such work. No proceedings can be instituted for offences in this connection without the prior consent of the Minister of Agriculture and Fisheries.

This year twenty-five complaints regarding noxious weeds were received. On investigation it was found that in twenty-two of these cases there were one or more of the specified weeds with which we are able to deal. These are:—

Spear Thistle (*Carduus lanceolatus* L). (*Cirsium lanceolatum* Scop).

Creeping or Field Thistle (*Carduus arvensis* Curt). (*Cirsium arvense* Scop).

Curled Dock (*Rumex crispus* L).

Broad Leaved Dock (*Rumex obtusifolius* L).

Ragwort (*Senecia jacobea* L).

Instead of serving notice under the order, informal approach was made and although 90% of the offenders pleaded shortage of labour, further action was deemed to be unnecessary.

It will be appreciated that there are real difficulties when dealing with these overgrown, weedy sites, unless one of the weeds specified can be found upon them. Yet it is not easy to suggest in what way the list of weeds mentioned can be extended as many have now become cultivated. An example of this cultivation is that of the willow herb. These are apparently used in the cultivated state in many herbaceous borders so that, if their latin classification were added to the list, many herbaceous borders would be doomed. In fact, the only weeds not cultivated in some way or another are the five given in the original schedule.

Attempts have been made to set up procedure whereby assistance can be obtained from the local authority to deal with these sites which, in view of joint ownership or occupation and the difficulties in obtaining labour for the necessary work, preclude an easy solution. The arrangements envisaged would mean that a team of workers from the staff of, say, the park superintendent, with the necessary equipment, could be made available to owners of land affected who, while willing to carry out the requirements of the department, are not in a position to do so themselves.

It is sometimes forgotten that, quite apart from the nuisance and agricultural aspects, there is also a public health angle. In Canada a great deal of work has been done to tackle the problem in order to eliminate, as much as possible, the pollen dust in the air which may set up hay fever, among other things.

It is important to note that wherever prompt and satisfactory treatment of these sites is required, the local authorities in other countries have been forced to provide a more or less free service.

Return made to Director of Statistics, Ministry of Labour and National Service.

FACTORIES ACTS, 1937 and 1948.

1.—Inspection of Factories.

Premises (1)	Number on Register (3)	Number of		
		Inspec- tions (4)	Written notices (5)	Occupiers prose- cuted (6)
(i) Factories in which Sections 1, 2, 3, 4 and 6 are to be enforced by Local Authorities	77	316	30	—
(ii) Factories not included in (i) in which Section 7 is enforced by the Local Authority	448	999	56	—
(iii) Other Premises in which Section 7 is enforced by the Local Authority (excluding out-workers' premises)	58	—	—	—
TOTAL ...	583	1,315	86	—

FACTORIES ACTS, 1937 and 1948.

2.—Cases in which defects were found.

Particulars (1)	No. of cases in which defects were found				No. of cases in which prosecutions were instituted (7)
	Found (3)	Remedied (4)	Referred To H.M. Inspector (5)	Referred By H.M. Inspector (6)	
Want of cleanliness (S.1)	10	6	—	8	—
Overcrowding (S.2)	—	—	—	—	—
Unreasonable temperature (S.3) ...	1	1	—	1	—
Inadequate ventilation (S.4)	10	10	—	—	—
Ineffective drainage of floors (S.6)	—	—	—	—	—
Sanitary Conveniences (S.7)—					
(a) Insufficient	18	13	—	9	—
(b) Unsuitable or defective ...	158	142	—	36	—
(c) Not separate for sexes ...	4	3	—	4	—
Other offences against the Act (not including offences relating to Outwork)	10	4	6	2	—
TOTAL ...	211	179	6	60	—

FACTORIES ACTS, 1937 and 1948.

Outworkers.—Lists of Outworkers received during 1949.

Description of Homework	No. of outworkers	
	February	August
Making of wearing apparel	27	44

B. SHOPS AND YOUNG PERSONS (EMPLOYMENT) ACTS.

By E. G. H. Spencer (Chief Shops Inspector).

Legislation affecting the Welfare of Workers in the Distributive Trades.

The year under review brought no changes in shops' legislation, so that the Acts concerned with the welfare of employees in the distributive trades remains at seven. These may be summarized as:—

- (a) *The closing of shops*—in the evenings; on the weekly half holiday; and on Sundays.
- (b) *Shop Assistants' conditions of employment*—meal intervals; weekly half holidays; compensatory holiday for Sunday employment; and, in the case of young persons under the age of 18, restrictions on early morning and night employment, and the number of hours worked in any one week, etc.

(c) *Arrangements for health and comfort of shop workers.* Section 10 of the Shops Act, 1934, requires suitable and sufficient ventilation, temperature, lightning, sanitary accommodation and washing facilities to be provided and maintained, in retail shops, wholesale shops and warehouses occupied by retail traders or wholesale dealers or merchants. The Chief Sanitary Inspector enforces the provisions of this section, but the Shops Inspectors have a statutory obligation to take note of and, if necessary, report any contraventions. During the year 140 such cases were reported.

Other Enactments.

The Young Persons (Employment) Act, 1938, is administered by this Inspectorate, and provides protective legislation for young persons under the age of 18, and over school age, in occupations not regulated by the Shops, Factories, or Mines and Quarries Acts, *e.g.*, cinema operators and usherettes, van boys, and delivery boys employed by transport undertakings, outdoor messengers, lift attendants, page boys and cloakroom attendants employed in residential hotels and clubs, etc.

The Sunday Entertainment Act, 1932, provides, *inter-alia*, for compensatory holidays to be given to all persons employed on Sunday in connection with cinematograph entertainment or any other entertainment or exhibition. The Licensing Justices require records of such holidays to be maintained at each cinema licensed to open on Sundays, and on their behalf, these records are periodically checked by the Shops Inspectors.

Routine Inspections and Contraventions.

During the year 5,408 visits and 989 re-visits were made under the Shops Acts. 138 visits and 3 re-visits under the Young Persons (Employment) Acts, and 84 visits and 10 re-visits under the Sunday Entertainments Acts (see detailed summary).

753 infringements were revealed as a result of routine visits, and the majority were immediately adjusted by the persons concerned. Written warnings were issued in thirty-one cases and legal proceedings taken in one case.

Closing Exemptions.

Exemptions from evening closing.

The Local Authority is empowered to grant exemption from evening closing in respect of any retail trade carried on at exhibitions, if satisfied that such trade is subsidiary or ancillary to the main purpose of the Exhibition. Exemptions were granted in respect of the following exhibitions:—

The Bristol Ideal Homes Exhibition, Brislington.

The Bristol Horticultural and Chrysanthemum Society, at the Drill Hall, Old Market Street.

Exemption from Sunday closing.

The Local Authority may grant exemption from Sunday closing in respect of any retail trade carried on at any place of natural beauty or historic interest, if satisfied that such sale is desirable in the interests

of the public. The proprietor of the business carried on at the Kiosk, Clifton Suspension Bridge, was granted an exemption from Sunday closing, and is permitted to sell: guide books, photographs of Clifton Suspension Bridge and souvenirs.

Winter closing.

The war-time regulations fixing earlier closing of shops remained in force, and was operative from the first Sunday in November until the first Sunday in March.

Lectures and Staff Matters.

Shops legislation—past, present and future, formed the subject of lectures given to the undermentioned organisations:—

- (a) All Saints Literary Club, Clifton.
- (b) Bristol Co-operative Society—"Grocery Managers Refresher Course," at the Merchant Venturers' Technical College.

Staff.

The following changes took place during the year:—

- (1) Mr. C. L. Bryant—Chief Inspector since 1936, and Welfare Officer since the inception of T.B. Welfare, relinquished the former appointment to devote the whole of his time to welfare work.
- (2) Mr. M. A. L. F. Serjeant was appointed vice Mr. E. P. Harvey, who resigned in May, to enter business on his own account.

The present staff administering the Shops Acts and kindred legislation consists of:—

Chief Inspector (M)	1
Inspectors (M)	2
Inspectors (F)	1
	—
TOTAL	4
	—

National Conference.

The Chief Inspector attended a three day Annual Conference of the "National Association of Shops Acts Inspectors" at Margate in September, 1949.

Shops Acts and Young Persons.

1948		1949
6,379	<i>Visits—</i>	
160	Retail	5,282
	Wholesale	126
1,128	<i>Re-visits—</i>	
32	Retail	967
	Wholesale	22
726	<i>Infringements—</i>	
77	Failure to exhibit notices	589
14	Half holiday and compensatory holiday	97
46	Hours of young persons	20
3	Meal intervals	40
	Seats for female assistants	3
311	<i>Assistants' Facilities—</i>	
133	Referred to C.S.I. (Section 10)	140
24	Verbal warnings	200
—	Warning letters	31
	Legal proceedings	1
76	<i>Sunday Entertainment Act—Cinemas—</i>	
2	Visits	84
3	Re-visits	10
2	Infringements—Holidays	4
—	Records	4
—	Verbal warnings	—
	Reported to Licensing Justices	—
62	<i>Young Persons (Employment) Act, 1938—</i>	
2	Visits	138
	Re-visits	3
1	<i>Infringements—</i>	
	(1) Night employment and hours	4
	(2) Records	
	(3) Meal Intervals	
	(4) Half-day and compensatory holiday	
1	Verbal warnings	3
	Written warnings	
69 hrs.	<i>Inspectorial Staff—Work outside normal Office hours—</i>	
	Evenings	128 hrs.
	Sundays	33 hrs.

C. METEOROLOGICAL OBSERVATIONS, 1949.

*By Mr. H. H. Harding (F.R. Met. Soc.), Frampton Cotterell,
Nr. Bristol.*

Mean pressure at 9 a.m. G.M.T. (corrected) ...	30.022 inches.
Departure from average (32 years)	+ 0.069 inches.
Greatest pressure at 9 a.m.	30.868 ins. January 30th.
Least pressure at 9 a.m.	28.447 ins. January 1st.
Extreme range	2.421 inches.
Total rainfall at Bishopston (St. Andrew's Park)	30.32 inches.
Departure from average Clifton (39 years) ...	— 4.77 inches.
Number of rainy days	158.
Heaviest fall in 24 hours	1.10 ins. on August 1st.
Total rainfall at Frampton Cotterell	27.76 inches.
Departure from average	— 3.86 inches.
Number of rainy days	1.63.
Departure from average	— 21.
Days with 0.04 in. or more	103.
Days with less than 0.04 in.	60.
Days with traces (less than 0.005)	22.
Greatest fall in 24 hours	1.09 ins. on October 25th.
Mean humidity at 9 a.m.	80.66%.
Mean temperature (maximum and minimum) ...	51.6 degrees.
Departure from average	+ 2.2 degrees.
Maximum temperature in screen	89.8 degrees on July 12th.
Maximum temperature in sun	128 degrees on June 28th.
Minimum temperature in screen	19.7 degrees on February 4th.
Minimum temperature on grass	10 degrees on February 3rd.
Extreme range (maximum and minimum) ...	70.1° degrees.
Mean of warmest day	74.3 degrees on July 12th.
Mean of coldest day	30.3 degrees on February 3rd.
Hours of bright sunshine (estimated)	1,633.
Departure from average	+ 95.
Days of bright sunshine	148.
Days entirely overcast	67.
Days with thunder and lightning	16.
Days with fog	65.
Days with snow	4.
Number of frosty nights	47.
Number of ground frosts	95.

THE REPORT OF THE PUBLIC ANALYST, OFFICIAL AGRICULTURAL ANALYST AND GAS EXAMINER.

By E. G. Whittle, B.Sc. (Lond.), F.R.I.C.

The Report is divided into seven main sections as under:—

Part I Food and Drugs Act.

Part II Fertilisers and Feeding Stuffs.

Part III Waters, Swimming bath samples, Effluents and Sewage Chlorination.

Part IV Rag Flock Act.

Part V Miscellaneous Analyses.

Part VI Gas Regulation Act.

Part VII Atmospheric Pollution.

SUMMARY OF SAMPLES.

Table 1.

Food and Drugs Act	2,184
Waters, Swimming Baths and Effluents	397
Fertilisers and Feeding Stuffs	12
Rag Flock	9
Gas Undertakings	520
Atmospheric Pollution	345
Miscellaneous	491
Health Department (D.S.I.)	80
	<hr/> 4,038 <hr/>

Part I.

FOOD AND DRUGS ACT.

During the year 2,184 samples were submitted for analysis under the Food and Drugs Act, 1938.

Table 2 shows the nature and number of samples submitted with the number reported genuine and the number adulterated.

Table 2.

Nature of sample	Number examined	Number genuine	Number adulterated
Milk	1,210	1,189	21
Condensed Milk	2	2	0
Ice Cream	189	189	0
Ice Lollies	31	31	0
Butter	67	67	0
Margarine	57	57	0
Cooking Fat	56	56	0
Lard	2	2	0
Shredded Suet	8	8	0
Cheese	14	14	0
Cooking Fat	1	1	0
Baking Powder	12	12	0
Golden Raising Powder	4	4	0
Coffee and Coffee and Chicory Essence	34	33	1
Tea	20	20	0
Cocoa	18	18	0
Christmas Pudding	5	5	0
Almond Paste	1	1	0
Flavouring Essence	4	4	0
Saccharin Tablets	8	8	0
Gelatine Powder	13	11	2
Ground Ginger	9	9	0
Rennet	1	1	0
Fruit Cordial	2	2	0
Fish Cakes	2	2	0
Meat and Fish Paste	19	19	0
Sausages and Sausage Meat	17	14	3
Table Salt	4	4	0
Salad Dressing and Salad Cream	10	10	0
Mixed Herbs	9	9	0
Vinegar	13	11	2
Pickles, Sauce and Ketchup	13	13	0
Pepper	8	8	0
Soup Powder	9	5	4
Curry Powder	12	12	0
Mustard, Mustard Compound and Horse-radish with Vita Cream	17	17	0
Gravy Browning	4	4	0
Mineral Water	14	14	0
Cider	15	14	1
Tonic Wine and Ruby Wine	8	8	0
Beer and Ale	18	15	3
Malt Preparation and Extract of Malt	2	2	0
Disinfectant	1	1	0
Fresh Pears	3	3	0
(1) Sugars	51	51	0
(2) Starchy Foods	78	77	1
(3) Spirits	35	32	3
(4) Drugs	54	48	6
Total ...	2,184	2,137	47

Adulteration rate of all samples, 2.15%

Number of samples examined	...	2,184
" " " adulterated	...	47
" " " genuine	...	2,137

Of the 2,184 samples examined 476 were sealed (having been divided in accordance with the provisions of section seventy of the Food and Drugs Act, 1938), and 1,708 were unsealed or informal samples.

Comparative figures for adulteration in Bristol for the last five years are given in Table 3.

Table 3.

	1945	1946	1947	1948	1949
Total number of samples ...	2,353	2,272	2,068	2,527	2,184
Milk, per cent. adulterated ...	5.54	5.82	4.92	4.06	1.73
Food (other than milk) per cent. adulterated	4.33	2.56	1.61	2.58	2.67
Drugs, per cent. adulterated ...	5.26	2.84	3.22	1.31	11.11
Total per cent. adulterated ...	5.18	4.84	3.72	3.56	2.15

Milk.

Of the 21 samples condemned, 12 were deficient in fat, and 9 gave evidence of added water.

Table 4 gives the figures for samples containing added water.

Table 4.

Lab. No.	Analytical Data			Result
	Fat	Non-fatty solids	Freezing point depression °C	
V. 19	3.55	7.40	0.443	12.9% added water
V. 20	3.35	7.55	0.459	11.2% " "
Y. 245	3.55	8.40	0.511	1.2% " "
Y. 246	3.55	8.35	0.511	1.8% " "
Y. 256	3.00	8.30	0.510	2.3% " "
Y. 257	3.75	8.30	0.511	2.3% " "
Z. 35	2.65	6.25	0.397	26.4% " "
Z. 38	3.60	6.40	0.381	24.7% " "
Z. 106	3.90	8.00	0.489	5.9% " "

Table 5.

				Samples of milk	
				condemned for deficiency in fat	condemned for added water
1st Quarter	...	...	...	3	5
2nd " "	...	...	...	2	0
3rd " "	...	...	...	1	0
4th " "	...	...	...	6	4
				—	—
				12	9
				—	—

Twenty-nine samples were reported as abnormal, being low in non-fatty solids, and thirteen as suspicious, due to slight deficiencies of fat or very small amounts of added water.

The following are the figures for the suspicious samples.

Table 6.

Lab. No.	Fat %	Non-fatty solids %	Total solids %	Freezing point depression °C.
V. 75	3.55	8.35	11.90	0.525
V. 265	4.25	8.25	12.50	0.526
V. 287	3.95	8.40	12.35	0.513
V. 298	3.90	8.40	12.30	0.515
V. 299	3.45	8.40	11.85	0.511
V. 301	4.00	8.38	12.38	0.517
V. 304	3.78	8.43	12.21	0.511
V. 316	2.90	8.29	11.19	0.527
Y. 7	4.05	8.15	12.20	0.517
Y. 281	3.40	8.50	11.90	0.514
Y. 284	3.25	8.55	11.80	0.514
Z. 49	2.90	8.70	11.60	—
Z. 292	2.90	8.45	11.35	0.546

The average composition of genuine milks for 1949.

Table 7.

Month	Number for each month	Specific gravity	Fat %	Non-fatty solids %
January	147	1031.5	3.94	8.80
February	86	1031.7	3.58	8.77
March	174	1031.9	3.68	8.88
April	92	1031.8	3.53	8.80
May	115	1032.1	3.57	8.90
June	108	1031.9	3.59	8.86
July	46	1030.9	3.78	8.65
August	61	1031.1	3.79	8.67
September	51	1031.1	3.58	8.64
October	106	1031.2	3.70	8.87
November	82	1031.7	3.65	8.88
December	79	1031.2	3.59	8.90
Average for year 1949	1,147	1031.7	3.67	8.82
	(total)			

The above table does not include milk samples reported as suspicious and abnormal.

The average figures for all samples of milk examined during the year were as follows:—

Specific gravity	1031.6
Fat %	3.67
Non-fatty solids %	8.80

Condensed Milk.

Two samples were examined, one being skimmed sweetened and the other full cream sweetened. The figures for analysis are as follows:—

	Y.D.9	Y.D.10
Total Solids %	73.8	74.7
Sucrose %	47.3	41.6
Milk Solids %	26.6	32.9
Fat %	0.23	9.66
Protein %	10.63	8.90
Lactose % (hydrated)	13.47	12.43
Ash %	2.27	1.90
Weight of contents	386 grms.	381 grms.
Equivalent pints	1.93	1.75

Both these samples were up to the standard in all respects.

Ice Cream.

One hundred and eighty-nine samples were submitted under this heading and all were returned as genuine. Thirty-seven samples contained 8 per cent. or more of fat, the remainder containing a mean percentage of 5.5 per cent. of fat. Metals and preservatives were not detected.

In November, 1949, the Foods Standards Committee issued a press notice after consultation with Local Authorities and Trade Associations. The committee were of the opinion that a standard was in principle desirable for ice cream, but they recommended that action should be deferred, since because of the scarcity of ingredients, especially fats and milk solids, a satisfactory standard could be prescribed at the present time only at the expense of a reduction of supplies.

Thirty-one samples of Ice Lollies were examined and gave figures for total solids ranging from 1 to 14 per cent., these solids consisting of sucrose and citric acid. The principal flavourings were raspberry, orange, lemon, strawberry and lime. In two instances significant amounts of zinc were detected. Communication with the manufacturers revealed that zinc moulds were used in preparation of the lollies. Pasteurisation treatment in these moulds had caused the contamination and the manufacturers agreed to install moulds of stainless steel for the pasteurisation process.

Fatty Substances.

The following samples were examined and all found to be genuine:—

67	samples of	butter
57	„	„ margarine
14	„	„ cheese
56	„	„ cooking fat
2	„	„ lard
8	„	„ shredded suet
1	„	„ cooking oil

The Reichert figure on the samples of butter varied between 24.3 and 33.0 giving a mean of 28.5. The mean moisture figure was 14.8 per cent. The maximum permitted moisture figure of butter and margarine is 16.0 per cent. (Food and Drugs Act, 1938, sec. 32).

The butter fat content of margarine was well below 10 per cent. in all cases. The mean moisture figure was 13.1 per cent. Boric acid preservative did not exceed 0.25 per cent. which is the amount permitted and only three samples reached this maximum.

The fat content of the samples of cheese varied between 27.9 per cent. and 38.9 per cent. giving a mean figure of 32.2 per cent. The average amount of moisture was 31.13 and the mean Reichert figure was 26.6.

All of the samples of cooking fat consisted of 100 per cent. fat. Since cooking fats are generally used as a substitute for lard one would expect them to contain no moisture and this was found to be the case in all samples.

The two samples of lard were returned as genuine. The Iodine values of these two samples were 61.0 and 58.7.

All the samples of shredded suet were genuine, the fat ranging between 84.1 per cent. and 92.5 per cent.

The sample of cooking oil was found to be Arachis Oil which is suitable for cooking purposes.

Tea.

Twenty samples were examined. They all gave typical microscopical appearances and were genuine. The mean analytical figures are as follows:—

				%
Moisture ...	...	...	...	6.1
Total ash	...	...	...	5.7
Soluble ash	...	...	...	3.8
Alkalinity of Soluble Ash (K_2O)				1.7

Coffee.

Sixteen samples of coffee and one of coffee and chicory were examined. The average specific gravity of a 10 per cent. decoction of the samples of coffee was 1007.1.

The sample of coffee and chicory gave a specific gravity figure of 1010.2 for a 10 per cent. decoction.

Microscopical examination revealed typical structures in each case.

Coffee and Chicory Essence and Extract.

Seventeen samples were examined, one sample of coffee and chicory extract being condemned for a deficiency in caffeine to the extent of 26 per cent. The minimum requirement for coffee and chicory essence at the time of sampling was 0.25 per cent. caffeine. The average figure for caffeine in the remaining sixteen samples was 0.42 per cent.

The regulations relating these products have been amended and standards are now applied only to dry extracts.

Benzoic acid preservative permitted up to a maximum of 450 parts per million was detected in one sample, the amount found being 100 parts per million.

Cocoa.

Eighteen samples of cocoa were submitted, the mean analytical figures are as follows:—

				%
Moisture	...	...	...	5.56
Ash	...	...	...	6.18
Water Soluble Ash	...	...	...	3.01
Alkalinity as K ₂ O	...	...	...	2.07

Baking Powder.

Twelve samples were examined and gave the following mean analytical figures:—

				%
Total CO ₂	...	...	...	11.22
Residual CO ₂	...	...	...	0.19
Available CO ₂	...	...	...	11.03

The minimum requirement for available carbon dioxide is 8 per cent.

The amounts of fluorine found in six of the samples were within the limits laid down in the Fluorine in Food Order 1947.

Golden Raising Powder.

Four samples of Golden Raising Powder were examined, all of which were genuine.

The following are the figures of analysis:—

Lab. No.	Available CO ₂	Residual CO ₂	Fluorine p.p.m.
Z.D.2	10.20	0.60	8.8
Z.D.3	10.25	0.60	8.2
Z.D.4	13.00	0.10	6.1
Z.D.5	13.75	0.17	9.6

The minimum requirement for available carbon dioxide is 6 per cent.

Christmas Pudding.

Five samples of Christmas Pudding were examined and returned as genuine.

Until late 1949, actually about the time these puddings were sampled, S.R. and O. of 1943 was in force and prescribed a minimum of 9 per cent. oils and fats and a minimum of 36 per cent. of sugar. It is significant that the samples examined failed to attain either one or both of these standards but as the order had been revoked no action was possible.

Almond Paste.

One sample was examined and returned as genuine, the figures of analysis being: Fat % 8.44, Moisture % 8.08, Protein % 9.59, and Ash % 0.79.

Flavourings and Essences.

Two samples of flavourings and two samples of essences were examined.

The ginger wine flavouring and the almond flavouring were found to be genuine.

The sample of orange essence and the sample of peppermint essence were found to possess the characteristics of genuine essences.

Saccharin Tablets.

Eight samples were examined, the amounts of saccharin found varying between 0.18 and 0.23 grains.

Gelatine Powder.

Thirteen samples were examined, two being condemned for containing excessive amounts of copper.

The other eleven samples were examined for ash, zinc, arsenic, lead and copper and were found to be within the limits laid down in the Edible Gelatine Order, 1948.

Ground Ginger.

Nine samples were examined and all complied with the British Pharmacopœia limits for ash, water soluble ash, water soluble extractive and alcohol soluble extractive.

Rennet.

One sample was examined and made a satisfactory junket.

Fish Cakes.

Two samples were examined and both returned as genuine as they contained over 35 per cent. of fish which is the minimum required.

Meat and Fish Paste.

Nineteen samples were examined, eleven being fish paste and eight meat paste. These all complied with the requirements of S.I. 1948 No. 1509, that is; meat paste to contain not less than 55 per cent. of meat; and fish paste not less than 70 per cent. of fish.

The average figures of analysis are as follows:—

	Meat Paste	Fish Paste
	%	%
Fat	10.8	8.5
Protein and Ash	13.5	19.9

Sausages and Sausage Meat.

Fifteen samples of sausages and two of sausage meat were examined. Two samples of sausages and one of sausage meat were condemned for deficiency in meat.

The mean analytical figures for the fourteen genuine samples are as follows:—

				%
Moisture	...	...	...	52.3
Ash	...	...	...	2.0
Protein	...	...	...	9.3
Fat	...	...	...	22.8

The total meat content ranged between 48.7 per cent. and 64.8 per cent.

Table Salt.

Four samples were examined and found to be genuine. Two of these samples were iodised and were found to contain the declared amounts of iodine.

Salad Dressing and Salad Cream.

Two samples of salad dressing and eight of salad cream were examined and reported as genuine.

The mean analytical figures for the eight samples of salad cream are as follows:—

				%
Total Solids	...	...	...	42.3
Edible Oils	...	...	...	30.3
Dry Egg Yolk Solids	...	...	...	0.6

In view of comments made by the Ministry of Food, concerning difficulties in estimating lecithin in fresh eggs, no action could be taken in salad creams showing deficiency in egg yolk solids.

Mixed Herbs.

Nine samples were analysed and all were found to be genuine. No undue mineral matter was detected.

Vinegar.

Two samples of vinegar were condemned on account of deficiency in acetic acid.

The remaining eleven samples gave the following mean analytical figures:—

		Malt	Artificial
Specific gravity	...	1,013.0	1,009.0
Total Solids %	...	1.87	1.13
Ash %	...	0.49	0.38
Acetic Acid	...	4.53	4.67

Arsenic was well below the limit in all cases.

Three samples of malt vinegar were found to contain salt amounting to 1 per cent. This quantity in vinegar is unusual and information from the manufacturers and the Ministry of Food supplied the reason. The Ministry had granted permission to increase the salt temporarily because of difficulties in replacing pasteurising equipment.

Pickles, Sauce and Ketchup.

Thirteen samples were examined under this heading and all were returned as genuine. In September 1949 Tomato Ketchup became the subject of a Food Standards Order. The standards prescribed will operate for retail sales from 1st October, 1950, and briefly stated provide that ketchup, relish, etc., shall contain not less than 6 per cent. by weight of tomato solids and not more than 50 parts of copper per million parts of the dried total solids.

Pepper.

Eight samples were examined, the average figure for ash being 1.51 per cent. All samples showed the usual microscopical appearances and were genuine.

Soup Powder.

Nine samples were examined, five being condemned by virtue of mite infestation.

Curry Powder.

Twelve samples were examined and returned as genuine. The average figure for Salt (NaCl) being 3.16 per cent. The amounts of lead found were within the suggested limit of 10 parts per million. The Curry Powder Order 1949 to become operative for retail sales on 1st October, 1950, provides that curry powder shall contain not less than 85 per cent. of spices, aromatic seeds and herbs and not more than 10 parts of lead per million parts of curry powder.

Mustard, Mustard Compound and Horseradish with vita cream.

Seventeen samples were examined and consisted of twelve samples of Mustard, three samples of Mustard Compound, one sample of French Mustard, and one sample of Horseradish with vita cream.

The average figure for allyl isothiocyanate in the samples of mustard was 0.52 per cent.

The mustard compound gave the following figures for allyl isothiocyanate 0.63 per cent., 0.58 per cent. and 0.60 per cent.

The one sample of French Mustard contained 0.03 per cent. of allyl isothiocyanate.

The sample of horseradish with vita cream was returned as genuine.

Gravy Browning.

Four samples were examined, the mean analytical figures being:—

				%
Moisture	...	...	...	56.8
Ash	...	...	...	9.4
Salt (NaCl)	...	...	...	8.8

Non-alcoholic Drinks.

Fourteen samples of mineral water were examined and satisfied the Preservative Regulations in respect of sulphur dioxide and benzoic acid.

Two samples of fruit cordial also satisfied the preservative regulations.

Cider.

Fifteen samples were submitted under this heading, one being condemned due to an excessive amount of Copper.

In the other fourteen samples the amounts of Sulphur Dioxide, Lead, Copper and Arsenic found were within the prescribed or accepted limits.

Wine.

Five samples were labelled as Tonic Wine, one as Ruby Wine and two as Wine. The Labelling of Food Order requirements were satisfied and the alcoholic contents of the wines were in accordance with the stated amounts.

Beer.

All the samples were returned as genuine. The amounts of Sulphur Dioxide found were within the limit of 70 parts per million and only very small traces of arsenic were detected.

Malt Preparation and Malt Extract.

One sample of malt preparation and one of malt extract were examined. Adverse comment was made upon the malt preparation by virtue of the presence of osmophilic yeasts which had caused fermentation of the product. It is essential that malt preparations should be stored in a cool place since any rise of temperature will favour development of these yeasts.

Disinfectant.

One sample was examined to ascertain its strength and was reported as up to full strength.

Fresh Pears.

Three samples were submitted for examination to determine the amount of arsenic they contained. They were reported as genuine, the amount of arsenic being within the limits. Several other samples of pears were submitted and are considered in the miscellaneous analyses section of this report. All the pears were of Italian origin.

Sugars.

Fifty-one samples of sugar products were examined, consisting of the following varieties:—

Description				No. of Samples
Sugar	...	...	...	20
Jam	...	...	...	31

The twenty samples of sugar contained between 99 and 100 per cent. sucrose with very little ash and moisture.

The samples of jam satisfied the preservative regulations. The soluble solids ranged from 69.3 to 75.5 per cent., as obtained by the refractometer, giving an average figure of 71.7 per cent., which is well above the standard of 68.5 per cent. prescribed in the Preserves Order 1944 and 1946. The fruit contents of the jams were also in accordance with the Part II Schedule of the order.

Starchy Foods.

Forty-four of the samples examined under this heading were Flour Confectionery; e.g., Doughnuts, Jam Tarts, Queen Cakes, etc.

Twenty-three samples were examined, primarily for infestation only, one was subsequently condemned.

The remaining twenty-one samples gave the following average figures for general composition:—

Nature of sample	No. of samples	Moisture %	Ash %	Available CO ₂	Fat %
Plain Flour	5	9.45	—	—	—
Custard Powder	4	11.7	0.64	—	—
Sponge Mixture	4	8.1	—	0.35	—
Cake and Bun Flour	4	8.2	—	1.2	—
Pastry Dough (Mix)	4	—	—	—	15.5

Spirits.

Thirty-five samples of spirits were examined, consisting of the following:—

Whisky	31
Rum	4

Three samples of Whisky were adulterated. In two of these cases the licensees involved pleaded guilty to the offences and were leniently dealt with. Conviction was recorded with absolute discharge and £5 costs in each instance. The third case was subsequently withdrawn for technical reasons.

Drugs.

The fifty-four samples of drugs consisted of the following:—

Camphorated Oil	6	Aspirin Tablets	4
Olive Oil	4	Cough Syrup	2
Tincture of Iodine	11	Compound Syrup of Camphor	1
Aspirin, Phenacetin and		Parrish's Chemical Food ...	3
Caffeine Tablets	2	Zinc Ointment	3
Soda Mint Tablets	2	Boracic Ointment	4
Empirin Tablets	1	Sulphur Ointment	4
Grey Powder Tablets	2	Cough Mixture	2
Calomel Tablets	2	Cough Linctus	1

Of these drugs six samples of Tincture of Iodine were returned as adulterated.

Preservatives and Colouring Matter.

No evidence of preservative was found in milk or butter during the year. Considering that more than 1,200 samples of milk were examined, it is very satisfactory to be able to report that not one sample contained formaldehyde, boric acid or artificial colouring matter.

All the samples examined for sulphur dioxide preservative were found to comply with the regulations.

Table 9.

Nature of sample				No. of samples	
Beer	8
Cider	12
Jam	17
Mineral Water	6
Sausages (Preserved)	5
Gelatine Powder	4
Fruit Cordial	1

Benzoic acid was detected in one sample of coffee and chicory essence and one sample of pickles, both amounts being within the prescribed limits.

PART II.
Fertilisers and Feeding Stuffs.
Table 10—Fertilisers.

Lab. No. F. F.	Nature of sample	% Phosphoric Acid (P ₂ O ₅)						% (N)		Fineness	
		Soluble		Insoluble		Total		G	F	G	F
		G	F	G	F	G	F				
1	Growmore Fertiliser ...					7.0	8.3	7.0	7.2		
2	Growmore Fertiliser ...					7.0	9.0	7.0	6.8		
3	Growmore Fertiliser ...					5.0	8.0	7.0	7.0		
4	Growmore Fertiliser ...					5.0	7.8	7.0	7.7		
5	Nitrate of Soda ...							15.0	15.8		
6	Nitrate of Soda ...							16.0	15.8		
7	Sulphate of Ammonia ...							20.6	21.4		
8	Sulphate of Ammonia ...							20.6	20.7		
9	Bone Meal (Steamed) ...					29.0	35.0	1.4	1.3		
10	Bone Meal ...					27.5	34.5	0.8	1.5		
11	Compost Maker ...							—	5.7		

F = Found.

G = Guaranteed.

Table 11—Feeding Stuffs.

Lab. No. F. F.	Nature of sample	Oil %		Albuminoids %		Fibre %	
		G	F	G	F	G	F
12	Poultry Balancer Meal	2.5	2.7	20.0	19.34	9.0	6.9

F = Found.

G = Guaranteed.

NOTE :—

- (a) Samples 6, 8 and 11 were satisfactory and require no further comment.
- (b) 1, 2, 3, 4, 9 and 10 all contained an excessive amount of Phosphorus Acid but the excess was not to the prejudice of the purchaser.
- (c) 5 and 7 contained excessive amounts of Nitrogen but the excess was not to the prejudice of the purchaser.
- (d) 12 was slightly deficient in fibre but not sufficient to be regarded as to the prejudice of the purchaser.

PART III.

Water and Sewage Chlorination.

Three hundred and ninety-seven samples were examined, the various sources of supply being as follows :—

Table 12.

City water supplied from tap at Canynge Hall ...	...	37
City water supplied from tap at Jubilee Road, Knowle ...	...	45
Corporation Institutions ...	...	8
West Gloucester supply at Downend and Frenchay ...	...	46
Portishead supply at Ham Green Hospital ...	...	23
Private Houses ...	...	4
Wells, pumps, lakes and springs ...	...	31
Swimming baths waters ...	...	153
Subsoil Percolation water ...	...	1
Sewage and Trade Effluent ...	...	19
Avonmouth Docks ...	...	4
Ships in Port ...	...	2
Miscellaneous ...	...	24
		397

The city water as supplied by the Barrow Reservoir is sampled in the laboratory and the Sherbourne spring water supplying a portion of the southern part of the city is taken regularly at Knowle.

The mean figures of analysis are appended, together with those of the West Gloucester and Portishead supplies.

Table 13.

Source	Bristol Supply		Taps at Downend & Frenchay	Tap at Ham Green Hospital
	Tap at Canyng Hall	Tap at Jubilee Rd., Knowle		
Number of samples ...	37	45	46	23
	Parts per 100,000			
Total solids	28.9	34.5	34.3	58.5
Mineral matter	25.5	30.9	31.4	49.9
Loss on ignition	3.4	3.6	2.9	8.6
Chlorine as Chlorides ...	1.3	1.2	2.7	3.3
Total Oxidised Nitrogen	0.13	0.16	0.10	0.25
Free Ammonia	0.0040	0.0070	0.0016	0.0064
Albuminoid Ammonia ...	0.0083	0.0025	0.0065	0.0042
Total Hardness (Clark's Scale)	21.5	25.8	20.4	33.5
Permanent Hardness (Clark's Scale)	7.4	7.0	5.6	12.4
pH	7.5	7.3	7.4	7.4

Waters.

The above figures indicate the high degree of organic purity maintained in the public supplies and only on rare occasions were the bacteriological counts rather higher than desirable. Such counts were usually adequately explained by repair work and replacement of mains.

It has been the custom for many years to report most of the analytical figures in parts per 100,000. Recently, however, several interested bodies including the Institution of Water Engineers and the Society of Public Analysts have agreed that chemical results are better returned as parts per million and as from 1st January, 1950, this Department will unify its method of reporting and general data will be in line with figures for free chlorine and metallic contamination, if any. The joint committee of interested bodies have also published an admirable book of standardised methods as applied to water examination.

Continued attention and interest has been maintained in the city swimming baths and throughout the year the minimum requirement in respect of free chlorine has been well maintained. Although infantile paralysis is still a serious problem there is no evidence that swimming baths are implicated, and no case of paralysis has been traced to that source.

Sewage Chlorination.

The Sewage Chlorination Plant was in general operation from mid May to mid October, a total of 21 weeks.

Direct treatment of the river has proved successful.

Liquid chlorine delivery has been varied between road and rail, and there is now no doubt that road offers marked advantages.

New chlorinators are now needed even more urgently than before.

Subsidiary activities have included investigation of trade waste discharge, problems connected with local odour and pollution nuisance. Treatment of Blaise Castle paddling pool, also preliminary work for Kings Weston and Victoria Park pools.

Temporary chlorination has been undertaken at Crofts End Tip and at Brislington House and an emergency hypochlorinator has been installed at Periton Mead, Minehead.

Ham Green Hospital chlorinator has been maintained and, at Charterhouse Hospital, various duties have been undertaken to maintain a safe water supply.

General Operations.

All plant was in operation by 20th May, running at a low rate of dose until the last week of June—except for a few days during the neap tide of June 18th to 21st.

Some odour nuisance was apparent from 2nd July by which time the fresh water flow over Netham weir had practically ceased, and hot weather had settled in.

Treatment was at a maximum rate throughout July, and except for experimental changes, or borrowing of plant for direct river treatment, every chlorination station was run at its highest possible dose for several weeks.

As the direct river treatment experiment began to show some measure of success it was found possible to economise in consumption of chlorine by reducing the dose at some stations.

The high rate of dose remained in force until the weather broke during the second week of October.

A total of 185 drums, about 157 tons, of liquid chlorine was used during the season.

Direct Treatment of River Avon.

Following on last year's use of Bathurst Lock for "batch" treatment of the river, it was decided to continue this year, especially as conditions were much more promising from the experimental point of view.

During the neap tide period of 18th to 22nd July, 4 chlorinators were set up at Bathurst Lock and five "batches" of chlorine solution were released into the river at varying states of the tide. In all cases the results were most disappointing owing to the presence in the river of concentrated tannery wastes which reacted with the chlorine, before any appreciable sterilising action took place. Samples taken before and after treatment showed no improvement in septicity.

The river flow, during neap tide with no fresh water is very sluggish. Therefore it was felt that direct treatment with every available chlorinator might produce some effect.

Accordingly, by permission of the Haven Master, six chlorinators (later increased to 8) were set up alongside the Ashton Swing Bridge, and solution hoses were hung from the railway deck of the Bridge into the river. At peak periods as much as 200 lb. chlorine per hour could be applied to the river by this means. The Swing Bridge plant was in operation during the periods August 18th to 21st, August 29th to September 3rd, and September 14th to September 18th.

The most offensive section of the river at neap tide period consists of a volume of about 100,000,000 gallons of heavily polluted water which passes to and fro for about 5 days with no change other than the addition of fresh sewage, and has hitherto been beyond the reach of treatment. At each tide, this mass passes and repasses the point of treatment receiving a dose of over 2 parts per million every time.

Samples taken before and after treatment showed a marked reduction in septicity and there was a definite improvement in the atmospheric conditions over a wide area.

By far the worst smell nuisance this season was from the Cumberland Basin and entrance lock and was due to putrefying water from the Floating Harbour over which the officer has no control.

There was a further neap tide period between September 29th and October 3rd when it was felt that river chlorination would not be necessary owing to the lateness of the season. From October 2nd to about October 5th the smell nuisance was worse than at any time during the summer.

The officer's conclusion is therefore that effective control of odour, though not its complete elimination is at last within reach. By maintaining a reserve of heavy treatment capacity for use on the river, some relaxation of dosage rates may be possible at certain regular sewage treatment points, and the overall consumption of chlorine may not then be increased.

Liquid Chlorine Supplies.

Chlorine supplies have been quite satisfactory this year when delivered by road. Several experimental consignments have been sent by rail, but in spite of the greatest co-operation of all concerned, there is no comparison with the convenience and speed of road delivery.

At the request of Imperial Chemical Industries Ltd., every effort has been made to reduce the number of drums carried over in stock. A very real advance has been made assisting the withdrawal of gas by spraying the outside of the drums.

The refrigeration produced by rapid evaporation of chlorine tends to produce a very low temperature, and although the spray is of "cold" water, sufficient heat is supplied by this means to maintain the pressure of gas until a drum is quite empty. In this way drums can be emptied in less than 24 hours and at high capacity stations about half the previous number is sufficient for full working.

Chlorination Equipment.

Two of the original type A255 chlorinators have been robbed of some of their auxiliaries in order to maintain the other thirteen in a reasonable state of repair. There are now five post-war (type A303) machines giving satisfactory service which, apart from an annual overhaul require very little maintenance.

Two of these machines will be used in the new Prince Street station which, it is hoped, will be ready in 1950. The various temporary chlorination activities throughout the season have emphasised the need for high capacity portable equipment of a type which the makers are at present unable to supply. Much work has been done towards the provision of an easily erected chlorination plant, and one of the advantages of the older type chlorinator is the ability to convert it into a simplified lightweight machine, by rebuilding with standard modern spare parts.

Such modification has been projected for some time and has now become essential if the chlorination experiment is to progress, and keep within moderate expenditure.

It should be stated that the adapted machine will contain all the safety and reliability characteristics of the original but will probably be more sensitive to varying conditions. However, this will in no way detract from its usefulness for the purpose required.

A double corrugated iron hut has been constructed for use as a portable chlorination station, and both sections are at present in use at Crofts End Tip.

Subsidiary Activities.

Temporary chlorination work has been conducted at Crofts End Tip since October 17th on behalf of the Transport and Cleansing Officer in order to mitigate the smell and the action of Sulphuretted Hydrogen on paint and metal in the vicinity. Chlorine solution has also been applied to the drainage pump delivery to the sewer in order to protect the sewer linings and to reduce odour nuisance along the sewer route.

A chlorinator has been installed at Brislington Mental Home to prevent risk of Typhoid infection from the sewage outfall. This work is being done in co-operation with Keynsham Urban District Council and is being charged to Brislington House.

Chlorination staff and equipment have also been in operation at various points for the removal of local odour and pollution troubles.

The chlorination officer and his assistant have also been responsible for the maintenance of Ham Green Hospital chlorinator.

At Charterhouse Hospital, various duties have been undertaken including the chlorination and safe transfer into the roof tanks of over 20 tanker loads (25,000 gallons) of drinking water sent from Bristol. The existing chlorination plant there has been augmented with the Health Department's emergency machine which is at present operating at a temporarily polluted well.

The emergency installation of an automatic hypochlorinator has been carried out at Periton Mead School, Minehead, on behalf of the City Valuer and Chief Education Officer.

Preliminary work has been undertaken with regard to chlorination of the proposed paddling pools at Kings Weston and Victoria Park, and the Blaise Castle paddling pool has been maintained as previously.

Assistant Chlorination Officer.

On November 1st, Mr. Robbins left to take up a post with Doncaster Borough Council. The post of Assistant Chlorination Officer thus became vacant.

Mr. Dembrey, the Deputy City Analyst has for the time being taken over the duties of assistant chlorination officer, there being no other person available with sufficient qualifications and experience.

Conclusion.

Considering the weather conditions in general, sewage chlorination has been a marked success.

The variety of extra duties to which the chlorination staff have been called has required continuous experiment and improvement in equipment. The wide experience gained gives them confidence that any problem of pollution or nuisance in drainage or water supply can be tackled with every prospect of success.

PART IV.

Rag Flock Act.

Nine samples were examined to see whether they conformed to the standard of cleanliness laid down in the Rag Flock Acts 1911 and 1928, and the Rag Flock Regulations 1912. All the samples complied with the requisite standard of a maximum of 30 parts of chlorine per 100,000.

A new approach is made in The British Standards Institution B.S. 1425 to the problem of cleanliness of fillings and stuffings for bedding, upholstery, stuffed toys and the like.

A washing test is proposed, using a detergent solution of ammonia, methyl alcohol, acetone and water, which is capable of giving concordant and reproducible figures as a measure of dirt extract.

The work is not yet incorporated in new legislation and therefore the chlorine figure remains as the only statutory standard.

PART V.

Miscellaneous Analyses.

Table 14.

1. Infestation	...	...	...	...	...	...	...	15
2. General	...	...	...	...	...	...	...	143
3. Biochemical	...	...	...	...	...	...	...	40
4. Toxicological	...	...	...	...	...	...	...	9
5. District Sanitary Inspector (Health Department)	...	...	...	...	...	...	...	80
6. Ministry of Food	...	...	...	...	...	...	...	40
7. Ministry of Food (Infestation Branch)	...	...	...	...	...	...	...	24
8. Ministry of Fuel and Power, Motor Spirit Regulations, 1948	...	...	...	...	...	...	...	41
9. Central Purchasing Department	...	...	...	...	...	...	...	20
10. Port of Bristol Authority	...	...	...	...	...	...	...	22
11. Port Health	...	...	...	...	...	...	...	37
12. Other Corporation Departments	...	...	...	...	...	...	...	33
13. Special Examinations—								
(a) Atmospheric Pollution	...	...	...	...	...	...	...	25
(b) Teeth for lead	...	...	...	...	...	...	...	42
								571

(1) *Infestation.*

Thirteen articles of food and two specimens of insects were submitted. The insects were identified as the Golden Spider Beetle, *Niptus Hololeucus*, and as a dog flea together with a beetle, *Ptinus tectus*.

The foodstuffs found to be infested were Dried Peas, Mite present; Bread with *Tribolium*, Flour with Mite, and Rice flour with *Ephestia*.

Certain samples were condemned as unfit on account of heavy mould growth and these included Dried Peas and Processed Peel.

(2) *General.*

The 143 samples under this heading defy adequate classification. They included foodstuffs of many kinds, sweets, effluents, gelatine, Benzole, Breast milk, Prepared starches, Detergents, Candy floss crystals and Chewing gum.

To illustrate the diverse nature of the problems submitted to the analyst the following selection is made:—

A dish washing powder consisted of soap, sodium sulphate with chloramine T as the sterilising agent.

Some sweet mints and so called "Winter Mixture" were submitted with the complaint of alleged talc but whilst being of poor quality had a definite food value since they contained milk powder and lactose.

Chocolate Cocoanut Squares were found unsatisfactory on account of rodent attack.

Material resembling a piece of brown porous pot was found to be a portion of desiccated peel of the *Curcubitacae* family, probably water melon.

A preparation for whitening potatoes was found to be a 9 per cent. solution of sulphur dioxide in tap water. This was in use in a hospital and a warning was issued that care was necessary in handling the preparation.

A sample of alleged edible gelatine proved to be unrefined size.

Some samples of Danish Sausage, an excellent product in respect of meat content, were submitted because of mould development. The sausage was brine packed and owing to leakage of containers the mould had developed. A further objection was raised concerning the sausage. It appears to be the practice of the Danish authorities to attach a Government stamped lead seal. The use of lead in conjunction with foodstuffs is to be deprecated.

An intriguing instance of simple application of scientific principles concerned a sample of butter within a dirty greaseproof wrapping taken in transit from the railway. It was eventually demonstrated that the contaminant was magnetic oxide of iron and a small magnet alone was necessary to clinch the matter. Apparently at some stage in its travels the consignment of butter had been closely packed with the oxide.

A sample of milk was suspected from bacteriological findings to contain some bactericide and hypochlorite was detected.

Lemonade prepared in a hospital caused sickness and once again zinc was found. The use of galvanised vessels for such purposes continues and the laboratory receives at least one case a year.

In July and August the market became flooded with William pears from Italy. Appreciable quantities of arsenic were detected in the skins of the fruit and vendors were advised to wash and wipe the fruit before sale. Subsequent checks proved that this procedure was being carried out and no difficulty was encountered.

A sample of tomato paste also of Italian origin was condemned for excessive tin content amounting to 10 grains per lb.

An alleged sample of Irish butter, purchased direct from Ireland under a scheme, since stopped by the Ministry of Food, was found to be entirely margarine—an expensive purchase at 4/- a pound.

Three samples of Candy Floss crystals were found to consist almost entirely of sugar 99.7 per cent. with some flavouring and colouring. The Floss, like other preparations so much desired by the children, is produced by forcing the melted sugar through very fine jets to give the attractive if somewhat sticky sweetmeat.

A coffee and chicory essence in bottle was found to be fermenting and developing a mould. The amount of benzoic acid used as a preservative was found insufficient to fulfil its function in keeping the essence in a usable state.

Caps used in covering milk bottles were suspected to contribute some substance to the milk which was capable of interfering with the Resazurin Test employed for the keeping quality of milk. No evidence of phenolic bodies was obtained upon examination of the suspected caps.

Cooking fat, contained in a gift parcel from New Zealand, was found in generally satisfactory condition. A somewhat tallowy flavour was developing and early use was suggested. Rendering with a small quantity of sodium bicarbonate was suggested as a means of correcting the flavour.

A sample of vinegar was found to contain vinegar eels, nematode worms. These eels result from poor storage conditions and inadequate pasteurisation of the vinegar. They are non pathogenic to man but render the vinegar unsightly.

Late in the year two samples of a malt preparation submitted were found in a state of fermentation presumably due to osmophilic yeasts capable of developing in high sugar concentrations. The matter was taken up with the manufacturers whose reply is awaited.

"Bubbly" gum a chewing preparation was found to consist almost entirely of paraffin wax with a small quantity of flavouring. This was an "off points" preparation, harmless to chew but very unpalatable and even children would be unlikely to venture a second packet!

Some "Fruit Swizzers" were found to consist of sugar and tartaric acid with 2.6 per cent. of talc. Exception was taken to this rather excessive amount of talc as it is likely to cause digestive troubles particularly in children.

A sample of butter from a hospital was found to taste quite distinctly of petrol. The amount present defied isolation and enquiries at the hospital elicited the following information. A consignment of sawdust had been presented to the hospital and was used on the floor of the refrigeration room where the butter and other foods were stored. The sawdust was found to be impregnated with petrol and it was fortunate that no fire had resulted!

A sample of oats was found to contain an excessive amount of husk and had caused complaint owing to its dark colour particularly when porridge was prepared.

(3) *Biochemical.*

Forty specimens were examined in this section and included blood, urine, liver, portion of spinal cord and bone.

The 29 samples of blood examined for lead gave figures varying from nil to 2.4 mgrm. per 100 ml. The latter result was obtained in a case where lead pellets had been accidentally discharged into the skull. The urine in this case was also abnormally high at 0.68 mg. per 24 hour specimen.

Seven urines were examined for lead and, with the exception aforementioned, gave normal figures.

One sample of blood was examined for pyruvic acid and having regard to the generally accepted normal figures of 0.8 to 1.2 mg. per 100 ml. the amount found 0.10 mg. was definitely subnormal. It is known that pyruvic acid is closely associated with vitamin B₁ metabolism and a deficiency of B₁ results in an accumulation of pyruvic acid. The significance of the subnormal figure could not be decided.

The portion of spinal cord gave no evidence of lead and the liver associated with this gave 3.2 parts per million.

Probably the most interesting specimen of this biochemical section was a femur bone from a foetus. This was examined primarily for bismuth, the mother having been given a course of injections of bismuth. The bone was found to contain bismuth equivalent to 2 parts per million so that there appears to be no excessive transference of bismuth from the mother as a result of the bismuth injections. As a point of interest, the femur also contained copper 26 parts per million and lead 6 parts per million.

(4) *Toxicological.*

The nine specimens submitted were as follows:—

The viscera of a pig contained no phosphorus, cyanides or alkaloids.

The urine of one patient contained a trace of barbiturate but there was no evidence of this group of substances in the stomach washings.

The stomach washings in another case of suspected poisoning by Soneryl was free from this drug.

The urine of a third case showed no alkaloids but traces of an unidentified barbiturate and in a fourth case of alleged poisoning by Seconal gave faint and somewhat doubtful reactions for barbiturates in urine and stomach washings.

Two specimens in a case of continued use of Guy's pill gave no evidence of mercury in either the urine or nail clippings.

(5) *Health Department, District Sanitary Inspectors.*

The 80 samples submitted by the District Inspectors covered a wide range of foodstuffs and the following items are worthy of mention:—

Several samples of Piccalilli, Red Cabbage and Pickled Onions in jars were condemned by reason of heavy mould growth, foetid smell and badly rusted caps.

A portion of a meat pie contained an unusually shaped piece of gristle which was mistaken in the first instance for a part of a mouse.

A sample of anchovy paste in olive oil of Portuguese origin, contained portions of solder in the paste and upon examination revealed an excessive amount of tin.

To further illustrate the cosmopolitan nature of our work the following articles are of interest:—Tomato Ketchup from Holland had separated badly and lacked sufficient emulsifying agent to ensure a sound product; canned brawn from Belgium and Vienna Sausage of French origin were satisfactory; Pork Brawn from Hungary was bacteriologically unsound; and Cheese from France was mouldy and in an advanced state of decomposition. Whilst, in August, there was a spate of pears from Italy which were found to contain significant amounts of arsenic.

Pearl Barley, sago, macaroni and pudding mixture were found to be infested with tyroglyphid mite.

A specimen of flies were found to be Hover flies and an insect proved to be a rice weevil.

One specimen of cheese was infested with the "cheese skipper" and another sample was free from alleged mould or oil.

A specimen of degreasing crystals consisted principally of sodium silicate with a trace of an antiseptic.

Two samples of water and one of sludge contained traces of mineral matter but there was no evidence of petrol as alleged.

(6) *Ministry of Food.*

There was a marked increase in the number of samples examined this year for the Enforcement Officers of the Ministry of Food. Of the 40 samples submitted, 26 were of cake and confectionery taken for composition in relation to maximum prices for such articles; 9 were of beef or pork sausages all of which were deficient in meat in amounts varying from 9 to 67 per cent.; one sample of meringues contained no flour ingredient was thereby excluded from the Cake and Confectionery Order; 2 samples of corned beef gave no evidence of phenols; 1 sample of marinated fish was in satisfactory condition; and finally a sample of chewing gum was found to be principally paraffin wax with a trace of flavouring.

(7) *Ministry of Food, Infestation Branch.*

24 samples of maize of Russian origin were examined for moisture content and gave figures ranging from 12.8 to 17.9 per cent. These figures are required by the Ministry in order to eliminate batches of maize with moisture figures above 15.5 per cent. Such maize is not considered as suitable for fumigation treatment.

No. in Analyst's Book	Samples submitted by Chief Sanitary Inspector under the Food and Drugs Act Nature of Sample	Formal or Informal	Nature of Adulteration	Action taken
Cases brought forward from previous year and where action has now been completed,				
V. 570	Milk	FORMAL	46.5% added water	Fine of £10 imposed and registration as purveyor of milk cancelled by Magistrates.
V. 619	Milk	Informal	3.5% added water	Formal samples were taken—Nos. V.19 and V.20—see below (1st quarter of 1949). Formal sample taken—see Z.D.1 (1st quarter of 1949). Fined £5. Dismissed under Probation of Offenders Act. 20/- costs. Fined £5. Fined £3.
V. 634	Milk	Informal	7.6% added water	
V. 635	Milk	Informal	3.5% added water	
Z.D. 143	Coffee and Chicory Essence	Informal	28% deficient in Caffeine	
V.D. 144	Whisky	FORMAL	6.9% added water	
W.D. 159	Whisky	FORMAL	3.8% added water	
W.D. 200	Whisky	FORMAL	10% added water	
Y.D. 155	Whisky	FORMAL	5.4% added water	
Samples reported as adulterated during 1st quarter of 1949.				
V. 19	Milk	FORMAL	12.9% added water	Fined £20.
V. 20	Milk	FORMAL	11.2% added water	Fined £20.
Y. 1	Milk	Informal	15% deficient in fat	Whole consignment bulked proved genuine.
Y. 5	Milk	Informal	5% deficient in fat	Abnormal milk—as the cow gave it.
Z. 35	Milk	Informal	26.4% added water	Repeat samples genuine.
Z. 38	Milk	Informal	24.7% added water	Repeat samples genuine.
Z. 106	Milk	Informal	5.9% added water	Repeat sample unobtainable.
Z. 120	Milk	Informal	13.3% deficient in fat	Whole consignment bulked proved genuine.
V.D. 22	Vinegar	FORMAL	Deficient in acetic acid to the extent of 10%	Cautioned by Town Clerk.
V.D. 24	Vinegar	FORMAL	Deficient in acetic acid to the extent of 15%	Cautioned by Town Clerk.
X.D. 11	Tincture of Iodine	Informal	Deficient in iodine to the extent of 11.8%	Repeat formal sample see Y.D.36.
Y.D. 36	Tincture of Iodine	FORMAL	Deficient in iodine to the extent of 7.3%	Cautioned by Town Clerk.
Z.D. 1	Coffee and Chicory Essence	FORMAL	Deficient in caffeine to the extent of 26%	Referred to the Ministry of Food who considered no further action necessary.
Z.D. 32	Sausage Meat	Informal	Deficient in meat to the extent of 18.2%	Repeat sample genuine.

No. in Analyst's Book	Samples submitted by Chief Sanitary Inspector under the Food and Drugs Act Nature of Sample	Formal or Informal	Nature of Adulteration	Action taken
Samples reported as adulterated during 2nd quarter of 1949.				
W. 76	Milk	Informal	6.7% deficient in fat	Whole consignment bulked proved genuine. Repeat sample genuine. Repeat sample genuine. Repeat sample taken informally at Analyst's request. See No. Z.D.129. Formal repeat sample No. Z.D.143 taken (3rd quarter of 1949).
V. 219	Milk	Informal	13.3% deficient in fat	
V.D. 53	Cider	Informal	Contained 9 parts per million	
			Copper—4 parts per million excess	
Z.D. 87	Beer	Informal	Contained 2 parts per million	
			Lead—1.5 parts per million excess	
Z.D. 129	Beer	Informal	Contained 2.5 parts per million	
			Lead—2 parts per million excess	
Samples reported as adulterated during 3rd quarter of 1949.				
Z. 324	Milk	Informal	5% deficient in fat	Whole consignment when bulked proved genuine.
Z.D. 143	Beer	FORMAL	Contained 2.5 parts per million of Lead—2 parts per million excess	Cautioned by Town Clerk.
Y.D. 196	Gelatine	Informal	Contained 25 parts per million of Copper in excess of the maximum prescribed in the Edible Gelatine Order 1948, No. 2460	Formal repeat sample taken in 4th quarter of 1949—see Y.D.213.
Samples reported as adulterated during 4th quarter of 1949.				
V. 312	Milk	Informal	10% deficient in fat	Repeat sample genuine.
Z. 347	Milk	Informal	5% deficient in fat	Whole consignment bulked proved genuine.
Z. 353	Milk	Informal	8.3% deficient in fat	Whole consignment bulked proved genuine.
Y. 222	Milk	Informal	6.6% deficient in fat	Whole consignment bulked proved genuine.
V. 321	Milk	Informal	15% deficient in fat	Formal repeat sample taken (see V.349).
V. 349	Milk	FORMAL	6.6% deficient in fat	Case not yet heard.
Y. 245	Milk	FORMAL	1.2% added water	Cautioned by Town Clerk.
Y. 246	Milk	FORMAL	1.8% added water	Cautioned by Town Clerk.
Y. 256	Milk	Informal	2.3% added water	Repeat sample genuine.
Y. 257	Milk	Informal	2.3% added water	Repeat sample genuine.
Y.D. 213	Gelatine	FORMAL	Contained 25 parts per million copper in excess of the maximum prescribed in the Statutory Instrument, The Edible Gelatine Order 1948, No. 2460.	Case referred to the Ministry of Food for necessary action.

No. in Analyst's Book	Samples submitted by Chief Sanitary Inspector under the Food and Drugs Act Nature of Sample	Formal or Informal	Nature of Adulteration	Action taken
4th quarter of 1949—continued.				
V.D. 201	Beef Sausages	Informal	Deficient in meat to extent of 48.8%	Formal repeat sample taken—see V.D.214.
V.D. 214	Beef Sausages	FORMAL	Deficient in meat to extent of 46.4%	Referred to Ministry of Food for necessary action.
Z.D. 205	Soup Powder	Informal	Infested with Tyroglyphid	Condemned as unfit for human consumption and disposed of for animal feeding.
Z.D. 206	Soup Powder	Informal	Infested with Stegobium paniceum,	Condemned as unfit for human consumption and disposed of for animal feeding.
Z.D. 207	Soup Powder	Informal	Infested with Depidoptera	Condemned as unfit for animal feeding.
Z.D. 208	Soup Powder	Informal	Infested with Tyroglyphid	Condemned as unfit for human consumption and disposed of for animal feeding.
Z.D. 213	Cake Powder	Informal	Infested with Tyroglyphid	Condemned as unfit for animal feeding.
X.D. 75	Tincture of Iodine	Informal	22% in excess of the prescribed amount of iodine and 20% deficient in the prescribed amount of potassium iodine.	Condemned as unfit for human consumption and disposed of for animal feeding.
Y.D. 254	Tincture of Iodine	FORMAL	20% in excess of the prescribed amount of iodine and 22% deficient in the prescribed amount of potassium iodine.	Formal repeat sample taken—see Y.D.254.
X.D. 76	Tincture of Iodine	Informal	40% deficient in the prescribed amount of iodine and 10% deficient in the prescribed amount of potassium iodine.	Condemned as unfit for human consumption and disposed of for animal feeding.
Y.D. 255	Tincture of Iodine	FORMAL	42% deficient in the prescribed amount of iodine and 40% deficient in the prescribed amount of potassium iodine.	Formal repeat sample taken—see Y.D.255.
Z.D. 218	Whisky	FORMAL	8.0% added water	Cautioned by Town Clerk.
W.D. 63	Whisky	FORMAL	4.0% added water	Case not yet heard.
V.D. 240	Whisky	FORMAL	6.0% added water	Case not yet heard.

(8) *Ministry of Fuel and Power.*

Forty-one samples of motor spirit were submitted for examinations in accordance with the provisions of the Motor Spirit (Regulation) Act, 1948, and all these samples gave evidence of diphenylamine, the prescribed ingredient of commercial spirit. The samples were taken principally by Enforcement Officers of the Ministry, with several from the City Police and the Wiltshire County Constabulary. Your Analyst gave evidence upon several occasions although in general the evidence of the certificate was accepted. Late in the year an interesting situation arose as a result of a decision in the Scottish Court. The Sheriff in that instance held that the presence of diphenylamine had not been conclusively proved inasmuch as the prescribed reaction could be given by certain homologues of diphenylamine. The Government acted promptly and within four days of this decision had amended the Regulations to include diphenylamine and allied substances.

Nevertheless one appeal case based upon the Scottish findings was allowed early in 1950, and a case was stated and is pending decision. Subsequent laboratory activity was directed to the possibilities of proving the presence of diphenylamine and chromatographic methods have so far enabled us to distinguish diphenylamine and diphenyl benzidine and the technique promises well as rebutting evidence in the appeal case. Thereafter no difficulty will be encountered by virtue of the amendment to the regulations.

(9) *Central Purchasing Department.*

Of the twenty samples examined for contract purposes, 16 were paints of varying characteristics but mainly of white lead basis. One tinted paint had an antimony basis. All the paint samples were found to be in accordance with British Standard Specifications or where those standards were not applicable to such standard as the Central Purchasing Department considered desirable.

Samples of Dessert, Custard and Blancmange Powder were found to be of satisfactory composition.

One sample of Creosote was found in accordance with British Standard Specification except for a slight and unimportant variation in the distillation range.

(10) *Port of Bristol Authority.*

Fifteen samples of paint were examined and found to be in accordance with British Standard Specification or for certain types with standards required by the authority.

Several samples of used and unused greases and certain deposits were examined as a result of severe damage to machinery bearings. No evidence of abrasive material was found and the problem of the excessive wearing remained unsolved.

(11) *Port Health.*

Thirty-seven samples comprising a wide range of foodstuffs were examined mainly for preservatives and metallic contamination.

Four samples of Tomato puree were condemned for excessive tin content. All contained approximately 12 grains per pound.

Several samples of tomato juice, tomato soup and of peeled and cut tomatoes were examined for tin and copper. The highest figure for tin was 1.3 grains per lb. and the highest copper on the dried solids was 38 parts per million.

Other samples included Blackcurrant syrup, Beef extract, slab cake, Flour, Custard powder, Concentrated orange and grapefruit juices, cold pressed essential oil of orange, Tomato ketchup and Chutney.

(12) *Other Corporation Departments.*

Transport and Cleansing Department.

Twenty-four examinations were made for sulphuretted hydrogen and carbon monoxide at a Corporation tipping site. No evidence of either of these gases was found.

City Architect's Department.

A deposit, a portion of copper waste pipe, a seepage water and carborundum, were among the specimens submitted and information was provided relating to the control of mould growth.

City Engineer's Department.

Two samples of lubricating oil were free from undue acidity although the used oil contained a trace of free carbon.

A deposit taken from a drain consisted principally of calcium carbonate.

City Catering Department.

A sample of detergent was found to consist mainly of sulphonated fatty alcohols. Carbonate and silicate were absent.

(13) *Special Examinations.*

(a) Examination of teeth for lead content.

These estimations were continued from 1948 and a further forty-two specimens were examined. The results will be incorporated in a paper on "Lead in Relation to Disseminated Sclerosis" which it is hoped will be published in 1950. Statistical analysis of the lead findings in teeth confirmed the observation made in my previous Annual Report that there was a significant difference in the lead content of teeth cases of disseminated sclerosis as compared with normal persons.

(b) Atmospheric Pollution.

The twenty-five samples examined will be considered in the section concerned with this subject.

PART VI.**Gas Undertakings Acts, 1920—1934.**

The work under the above Act has been carried out in accordance with the Special and Special (Supplementary) Prescriptions of the Ministry of Fuel and Power (Gas Testing Section).

The three electrical Fairweather calorimeters situated at the works of the Bristol Gas Company recorded the calorific value of the city's gas supply, only one non-recorder test was made during the year.

The charts were verified by tests of calorific value made twice weekly at Avon Street, Stapleton Road and Canons Marsh testing stations and subsequently averaged to give the daily deviation from the declared calorific value—which is 460 B.Th.U. (gross) per cubic ft.

The gas supplied by the company for the 10 months of 1948 satisfied the requirements of the aforementioned prescription in respect of calorific value, pressure and purity. As indicated earlier in this Report, Gas Examination by this Department ceased on 31st October, 1949.

PART VII.**Atmospheric Pollution.**

The following table summarises the estimations made under this heading:—

Table 15.

Deposit Gauges	66
Lead peroxide for sulphur	121
Continuous smoke and sulphur dioxide estimations	158
	<hr/>
	345
	<hr/>

The City.

The four city stations were fully operative during the year and the re-sited gauge at Blaise Castle has been free from the depredations of hooligans.

The pollution is measured by the collection and analysis of the soluble and insoluble matters and tarry substance which are deposited from the air in a deposit gauge which consists of a large glass bowl of known area, connected with a glass reservoir. Each reservoir is replaced by a clean one on or about the 1st of the month. As a precaution each station is inspected about mid month, particularly after heavy rainfall.

The results are expressed in tons per square mile. The St. Philip's site shows the heaviest total deposition, 258 tons, with the Marsh Street gauge at 233 tons. Although the latter gauge gave the higher tar figure at nearly 4 tons per square mile per year. The control, or rural area, gauge at Blaise Castle gave 118 tons of total deposit and 1.6 tons of tar. (See graph on Atmospheric Pollution in 1949).

Similar results were obtained with the sulphur dioxide measurements. The concentration of this gas is measured by exposing cylinders of lead peroxide for a month. The peroxide is highly reactive to sulphur gases and in the process changes to lead sulphate. After exposure for one month the cylinders are conveyed to the laboratory and examined for the amount of sulphate produced. Results are returned as milligrams of SO_3 per 100 sq. cm. per day.

Continuous smoke and sulphur dioxide recordings.

After a break of several months, due to lack of an appropriate meter, recordings were resumed in June and continued for the remainder of the year. The smoke filters were submitted monthly to the Medical Research Council who are investigating the apparent increase of cancer of the lungs which has taken place in England and Wales during the last twenty years.

The increase may either be an apparent one only due to improved methods of diagnosis by X-rays and by other means, or may be due to an actual increase in the number of cases which occur. Atmospheric pollution naturally suggests itself as a possible factor, hence the Medical Research Council's interest in smoke filters from various co-operating authorities throughout the country. These filters are examined for traces of arsenic, coal tar and its derivatives and radio activity. No results have so far been published.

The apparatus in the laboratory requires attention every 24 hours and is designed so that the weight of smoke in mgms. per 100 cubic feet of air together with the quantity of sulphur dioxide in the air can be obtained simultaneously.

The Avonmouth Survey.

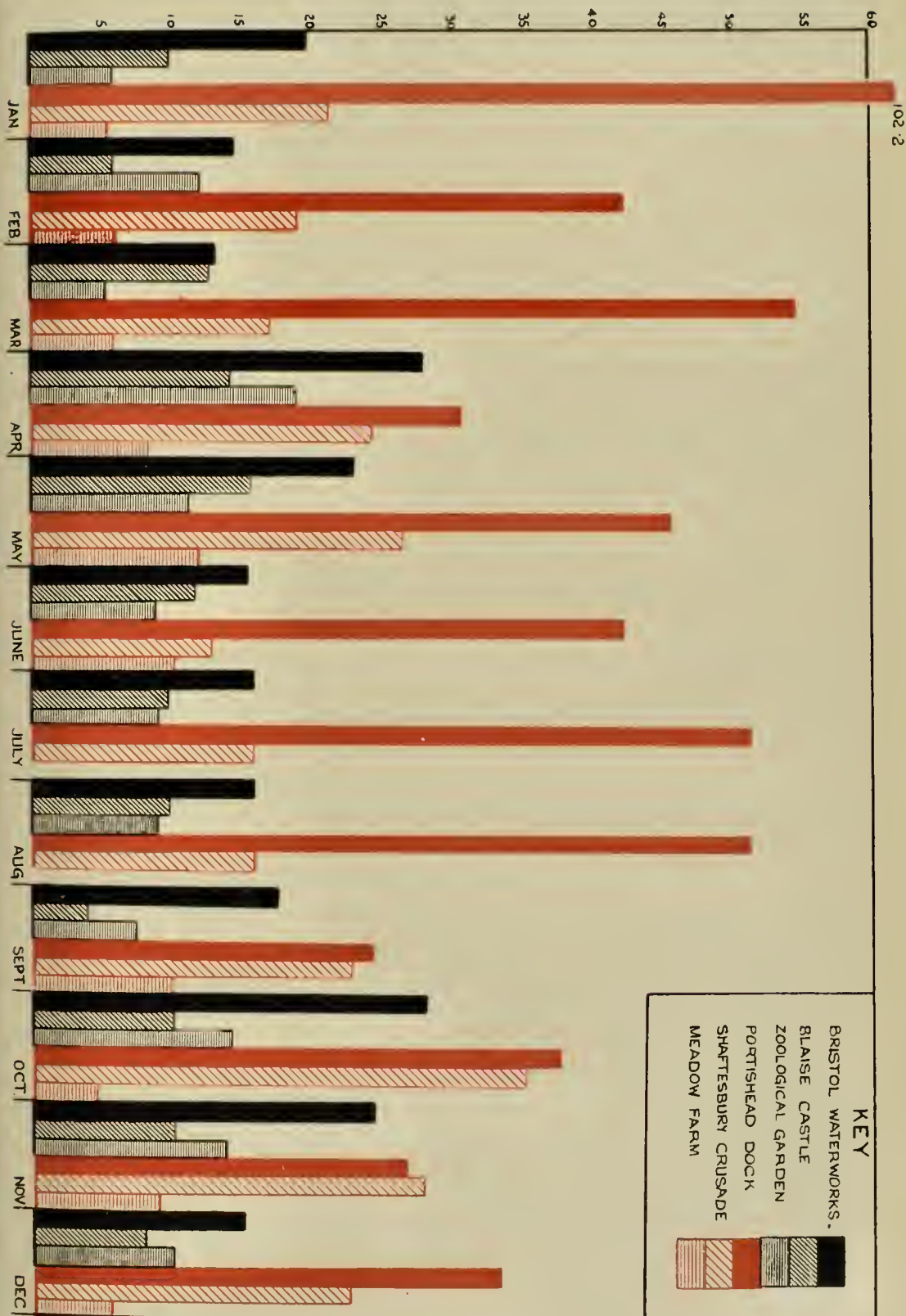
The survey in this area continued throughout the year although two sites of the original five were dismantled at the end of 1948. The desired information is given by the three existing sites at Avonmouth Dock, T Farm and Green Splot Farm, all of which are equipped with lead peroxide cylinders for sulphur dioxide pollution whilst the first two sites have also deposit gauges which are used for determination of total zinc and fluorine.

The results are correlated with polar diagrams giving wind direction, duration, and intensity.

The sulphur dioxide figures again indicate the heavy pollution in the Dock area. T Farm and Green Splot Farm sites show very similar and much lower pollution figures.

The zinc and fluorine examinations were first made in September, 1948, and in the corresponding months of 1949 there appears to be a considerable improvement in majority of the figures. Domestic fires will account for traces of fluorine and zinc but there is little doubt that the two sites investigated are receiving more of these two elements than can be accounted for from purely domestic sources.

UNITS TONS / SQ. MILE.



It may be questioned whether zinc is particularly toxic but like lead and certain other metals it may well have cumulative effects if ingested over long periods.

The effects of traces of fluorine are not yet fully known although it was shown recently in a survey at Fort William, Scotland, that fluorine in herbage was a very serious impediment to the economic methods of cattle and sheep farming in the area.

The only safe course therefore is to ensure, as far as is practicable, that the amounts of both elements present in the air we breathe are kept at the absolute minimum.

The Portishead Survey.

Four stations were in operation in this area throughout the year, all equipped with apparatus for sulphur dioxide determinations, and two with deposit gauges.

In general very similar results were noted as compared with 1948. It is probably too early to appreciate any significant change brought about by the operation of the new chimney as from 1st July, 1949. A number of the small stacks, which certainly caused the main grit nuisance, have been removed, but some are certainly still in use.

Other Activities.

Besides the purely chemical work performed in the laboratories the Analyst has many other functions.

Lectures in the Chemistry of Hygiene to doctors studying for the Diploma in Public Health and to prospective Sanitary Inspectors were given earlier in the year. Further evening lectures of a general character dealing with the work of the department were delivered to interested clubs, in particular to Town Guilds.

Your Analyst is a member of the Technical Advisory Committee set up to assist the Central Purchasing Committee upon Stores and several meetings were held during the year.

Several important items were the subjects of discussion involving no actual analytical work. Thus the Port of Bristol Authority sought information regarding the establishment of apparatus suitable for recording smoke pollution, a problem likely to arise with the development of the Carbon Black works in the Avonmouth area.

Another interesting problem concerned the mapping of tidal flow of the Severn in relation to the projected sewage scheme. The Chlorination Officer suggested the use of radio active material which could be fed into the Severn at the proposed outfall. It was considered that the subsequent distribution of the material—radioactive isotopes—could be speedily traced with Geiger counters operated from a motor launch. The Isotopes Division of the Research Station at Harwell considered the idea was quite practicable and when the new sewerage scheme begins to develop every effort will be made to put the ideas into operation.

Another matter relating to radioactivity was discussed with Hospital Authorities who were concerned with the disposal of excreta, etc., from patients undergoing treatment with short life radioactive substances. Before passage of such excreta to City sewers the wastes are held in storage tanks of suitable construction and material for such time as to ensure complete loss of activity, about 14 days holding would suffice.

The Manager of the Remploy Establishment (Rehabilitation of Tuberculous patients), sought information relating to difficulties in washing up and sterilising plates and cups, etc., used by the workers. The use of detergents with adequate preliminary boiling was advised.

Visitors to the Laboratory included the following:—Dr. Darma from Indonesia; Dr. Xuereb from Malta; Miss Hubbard; Pupils of St. Anne's Park Secondary Modern School; Members of the Domestic Science School; and a Swedish Student.

IV.

PORT HEALTH

PORT HEALTH SERVICES

MEDICAL INSPECTION AND SANITARY CIRCUMSTANCES

By Dr. D. T. Richards, Chief Assistant Port Medical Officer

As in previous years, this report is prepared on the lines indicated in Memorandum 302/S.A. issued by the Ministry of Health to Port Health Authorities. Many of the arrangements described hereunder have remained substantially the same during the past four years, and were fully detailed in the Annual Report for the years 1947 and 1948. Nevertheless, they have again been included in this year's report in order to provide a more comprehensive picture of the measures of hygiene in operation at the port.

I. Vessels entering the Port during the year.

The total tonnage entering the port for the year was 4,012,106, compared with 3,828,462 for the year 1948 and, as the accompanying table shows, the number of foreign-going arrivals is the highest since 1945—and is probably the highest peace-time total in the history of the outer docks.

Year	Avonmouth & Portishead	Bristol City	Total
1946	428	137	565
1947	492	216	708
1948	624	272	896
1949	697	227	924

Each of the 924 foreign-going vessels was boarded on arrival and subjected to established precautionary measures while in port.

Two hundred and seventy-one vessels arrived from ports or sea-boards included in the list of infected ports published weekly by the Ministry of Health and deemed to be infected with cholera, typhus, smallpox, plague or yellow fever. More than 1,000 daily re-visits were made by the inspectorate to this group of ships while in port. In this way the medical officer is, from day to day, kept informed of the state of health of crews in these potentially infected ships. Thus, during the year under review cases such as influenza, pneumonia, poliomyelitis, tuberculosis, dysentery and malaria—all of which demand instant action if only to exclude more dangerous infection—were brought to the immediate notice of the medical officers for disposal to the appropriate hospital.

The Port Medical Officer dealt with 38,601 passengers and crew, of whom 1,064 were referred to hospital, clinics, or private doctor, for treatment or observation.

II. Foreign Ports from which vessels arrive.

Algeria	...	...	Algiers, Bougie, Bona, Oran.
Argentina	...	...	Bahia Blanca, Buenos Aires, La Plata, Rosario, San Lorenzo, Santa Fe, Zarete.
Australia	...	...	Adelaide, Brisbane, Freemantle, Geraldton, Melbourne, Port Pirie, Picton, Sydney, Townsville, Wallaroo, Warri.
Belgium	...	...	Antwerp, Ghent.
Bermuda	...	...
Brazil	...	...	Amarracoa, Pernambuco, Port Alegre, Rio de Janeiro, Rio Grande, Santos.
British West Indies			Barbados, Bowden, Kingstown, Port Antonio, St. Vincent, Trinidad and Tobago.
Burma	...	...	Rangoon.
Canada	...	...	Botwood, Halifax, Montreal, New Westminster, Port Alberni, Port Churchill, Quebec, Sable, St. John, Sorel, Three Rivers, Vancouver.
Cape Verde Islands			St. Vincent.
Chile	...	...	Valparaiso.
Ceylon	...	...	Colombo.
Cuba	...	...	Santiago.
Cyprus	...	...
Cyrenaica	...	...	Tripoli.
Denmark	...	...	Copenhagen, Frederickssund, Horsens.
Egypt	...	...	Alexandria, Port Said, Suez.
Finland	...	...	Hango, Kotka, Mantyluoto, Oulu.
France	...	...	Bayonne, Bordeaux, Bourges, Carant, Deauville, Dieppe, Dunkirk, Havre, La Pallice, L'Orient, Marseilles, Nantes, Nemours, Port de Bouc, Port Loir, Rouen, Tonnay-Charente.
French Cameroons			Tiko Island.
French Equatorial Africa	...	...	Dakar, Grand Bassam, Libreville, Monrovia, Port Gentil.
Gambia	...	...	Bathurst.
Germany	...	...	Friedrichshafen, Hamburg, Wismar.
Gibraltar	...	...
Gold Coast	...	...	Accra, Freetown, Gambia, Takoradi, Winnebah.
Greece	...	...	Patras, Piraeus, Kalamata, Ravala, Salonika.
Holland	...	...	Rotterdam, Yjmuiden.
Iceland	...	...	Reykjavik, Siglufjord.
India	...	...	Bombay, Calcutta, Madras, Vizagapatam.
Iran	...	...	Abadan, Basra.
Ireland	...	...	Cork, Dublin.
Israel	...	...	Haifa, Tel Aviv.

Italy	...	...	Cagliari, Catania, Crotone, Genova, Livorne, Napoli, Reggio, Trieste.
Japan	...	...	Yokosuka.
Jugoslavia	...	...	Rijeka, Sabenco, Dubrovnik.
Kenya	...	...	Mombassa.
Malta	...	...
Mexico	...	...	Caripito, Tampico.
Morocco	...	...	Casablanca, Mazagan, Mogador, Safi, Sousse.
Netherlands	...	...	Amsterdam, Delfzyl, Rotterdam.
Netherlands West Indies	...	...	Aruba, Curacao.
New Zealand	...	...	Aukland, Lyttleton, Napier, Wellington.
Nigeria	...	...	Burutu, Lagos, Port Harcourt, Sapele, Warri.
Norway	...	...	Arundal, Bergen, Lørvik, Oslo, Risør, Skei, Trondheim.
Pakistan	...	...	Chittagong.
Panama	...	...
Persian Gulf	...	...	Bahrain Island, Ras Tanura.
Poland	...	...	Gdynia.
Portugal	...	...	Azores, Leixões, Lisbon, Oporto, St. Vincent.
Portuguese East Africa	...	...	Beira, Laurencio Marques.
Portuguese West Africa	...	...	Las Palmas (Canary Is.), Madeira, Teneriffe.
Puerto Rico	...	...	San Juan.
Rumania	...	...	Constanza.
San Domingo	...	...	San Miguel, San Pedro de Macoris.
Spain	...	...	Algeciras, Barcelona, Cadiz, Cádiz, Gandia, Seville, Valencia.
Sudan	...	...	Port Sudan.
Sweden	...	...	Göteborg, Göteborg, Gothenburg, Gäddede, Helsingborg, Helsingborg, Helsingborg, Iggesund, Karlsborg, Norrköping, Örnsholmsvik, Piteå, Stockholm, Stockholm, Skutskär, Sundsvall, Trelleborg.
Tunisia	...	...	La Goulette, Sfax.
Turkey	...	...	Istanbul, Izmir, Panderma.
Union of South Africa	...	...	Cape Town, Durban, East London.
Uruguay	...	...	Montevideo.
U.S.A.	...	...	Baltimore, Baton Rouge, Baytown, Beaumont, Boston, Brownsville, Charleston, Corpus Christi, Galveston, Houston, Lake Charles, New Orleans, New York, Norfolk, Philadelphia, Port Arthur, Port Everglades, Portland, Port Sulphur, Savannah, Wilmington.
U.S.S.R.	...	...	Novorossiisk, Odessa.
Venezuela	...	...	Punta Cardon.

I. Amount of Shipping Entering the Port during 1949.
(Avonmouth, Portishead and Bristol).

TABLE A.

	Number *	Tonnage *	Number inspected		Number reported to be defective	Number of vessels on which defects were remedied	Number of vessels on which defects were found and reported to Ministry of Transport Surveyors	Number of vessels reported as having, or having had during the voyage, infectious disease on board
			By the Medical Officer of Health	By the Sanitary Inspector				
<i>Foreign—</i>								
Steamers	...		613	613	182	161	1	
Motor	...	2,839,018	311	311	39	35	1	
Sailing	...		—	—	—	—	—	
Fishing	...		—	—	—	—	—	
Total Foreign	919	2,839,018	924	924	221	196	2	25†
<i>Coastwise—</i>								
Steamers	...		—	356	42	41	—	
Motor	...	1,173,088	—	259	6	6	—	
Sailing	...		—	—	—	—	—	
Fishing	...		—	—	—	—	—	
Total Coastwise	8,072	1,173,088	—	615	48	47	—	
Total Foreign and Coastwise	8,991	4,012,106	924	1,539	269	243	2	25†

*Figures supplied by courtesy of the Port of Bristol Authority. (Discrepancy between number of vessels shown as arriving and number shown as inspected in foreign-going section arises from differing classification of foreign-going and home-trade coastwise vessels as applied by the Port of Bristol Authority and the Port Health Authority).

†Excluding vessels having venereal disease on board.

II. Character of Trade of Port.

TABLE B.

(a) Passenger Traffic during the year 1949.

No. of Passengers	1st Class	2nd Class, 3rd Class, Transmigrants	Totals
<i>Inwards—</i>			
Aliens	148	—	148
British	2,635	—	2,635
<i>Outwards—</i>			
Aliens	92	—	92
British	1,988	—	1,988

(b) Cargo Traffic.

PRINCIPAL IMPORTS—1949.

Commodities		Tons
Grain	• Tons	810,187
Oilseeds and Nuts	—	32,244
Feeding Stuffs	—	101,054
Cereal Products for human consumption	—	53,017
Cocoa (and Chocolate)	—	34,230
Eggs—Fresh and Dried	—	3,631
FRUIT :		
Bananas	Bunches 3,058,180	38,193
Oranges and Lemons	Cases 287,813	12,677
Other Green Fruit	Tons —	6,417
Canned	—	2,649
Dried	—	17,857
Milk—Dried and Evaporated	—	2,642
METALS AND ORES :		
Brass	—	30
Copper	—	10,326
Iron	—	13,709
Lead	—	5,915
Spelter	—	9,532
Zinc Concentrates	—	107,170
Paper	—	14,195
Petroleum	—	1,333,160
Phosphate of Lime	—	125,138
PROVISIONS :		
Bacon	—	370
Butter	—	33,045
Cheese	—	24,749
Lard	—	2,383
Canned Meat	—	3,809
Frozen Meat	—	64,083
SUGAR :		
Unrefined	—	14,320
Molasses	—	28,191
Tobacco	—	42,349
Wine	Pipes 6,703	4,022
	Dozens 7,240	181
Wood and Timber	Tons —	123,573
Woodpulp	—	62,835
All other goods	—	156,675
TOTAL FOREIGN IMPORTS		3,297,499

PRINCIPAL EXPORTS—1949.

Chemicals :—						Tons
Salt Cake	...	...	...	...	...	1,555
Other kinds	...	...	...	...	...	1,495
Clay	...	...	...	...	...	15,492
Coke	...	...	...	...	...	17,244
Earths	...	...	...	...	...	724
Iron	...	...	...	...	...	5,901
Paper	...	...	...	...	...	533
Strontia	...	...	...	...	...	4,380
All other goods	...	...	...	...	...	81,111
TOTAL FOREIGN EXPORTS						128,435

III. Water Supply.

These arrangements were fully described in the report for 1948.

IV. Port Health Regulations, 1933 and 1945.

These arrangements remain substantially the same as in my report for 1948. There are, however, certain matters to which I would like to direct your attention.

Experience of Working of Article 16.

No case of unauthorised boarding was reported during the year but many illegal boarding attempts were prevented, strict warnings being duly given to the persons concerned. It is to be stressed that extreme care and vigilance is needed in order to secure compliance with the provisions of Article 16 (1) of the Regulations, and that few ships masters seem to be aware of their obligations in this respect.

Arrangements for the treatment of the venereal diseases.

Full information concerning the situation and giving the hours during which the medical officer is in attendance at the venereal disease centres at Avonmouth and at Bristol Docks, is given to the crew of every vessel entering the port. This information is contained in hand-bills, printed in several languages, which are freely distributed to each ship. When indicated, in-patient treatment under the direction of the venereal diseases consultant, is available at the Frenchay General Hospital, to which the appropriate beds have been transferred.

The arrangement whereby the assistant port medical officers, who are usually the first to ascertain venereal conditions, act in an additional capacity as medical officers to the venereal disease centre, has continued. This arrangement has worked satisfactorily. A high proportion of the Avonmouth shipping arrivals are of the tanker class and many of these discharge and sail within twelve hours of docking. Medical attention at the time of arrival, such as may only be provided under the above mentioned arrangement, is therefore available without delay.

The following table relates to seamen treated at the Avonmouth Centre during the years 1944–1949. It will be seen that the incidence of the various conditions treated during 1949 closely resemble the pattern of previous years, and it would now appear that the figures remain fairly constant for the port—in the region of 600 annually.

<i>Year</i>	<i>Syphilis</i>	<i>Soft Sore</i>	<i>Gonorrhœa</i>	<i>Non-V.D.</i>	<i>Total</i>
1944	154	19	159	311	643
1945	85	26	150	261	522
1946	67	27	254	291	639
1947	60	17	271	252	600
1948	77	20	298	179	574
1949	93	19	260	240	612

TABLE C.

Cases of Infectious Sickness landed from Vessels*

Disease	No. of Cases during 1949		No. of vessels concerned	Average No. of cases for previous 5 years
	Passen- gers	Crew		
Pulmonary T.B.	2	2	4	11.2
Influenza	1	4	4	7.2
Dysentery	—	2	2	1.2
Pneumonia	1	2	3	2.2
Poliomyelitis	—	1	1	0.2
Scarlet Fever	—	1	1	0.0
Malaria	—	3	2	4.8
Measles	2	—	2	0.4
Venereal Disease	—	534	270	601.8
Other diseases not included in Table C above landed from vessels*				
Disease	No. of Cases during 1949		No. of vessels concerned	Average No. of cases for previous 5 years
	Passen- gers	Crew		
Rheumatism	—	1	1	4.0
Nervous System	1	2	3	19.2
Circulatory	—	1	1	6.8
Respiratory	—	14	14	10.4
Digestive	2	20	21	39.6
Genito-Urinary	—	8	8	5.0
Skin and Cellular	1	21	19	38.0
Locomotor	—	10	10	5.8
Traumatism	—	6	6	33.8
Pregnancy, Child-birth and Puerperal state	1	—	1	0.0
Ill-defined	1	—	1	8.0

* Includes only cases requiring medical attention, but all were not removed from ships to hospital.

TABLE D.

Cases of Infectious Sickness occurring on vessels during the voyage but disposed of prior to arrival.

Disease	No. of Cases during 1949		No. of vessels concerned	Average No. of cases for previous 5 years
	Passengers	Crew		
Malaria	—	5	3	8.4
Pneumonia	1	—	1	0.0
Chicken Pox	—	1	1	1.8
Other diseases not included in Table D above occurring on vessels during the voyage but disposed of prior to arrival.				
Disease	No. of Cases during 1949		No. of vessels concerned	Average No. of cases for previous 5 years
	Passengers	Crew		
Circulatory System	—	4	4	1.0
Skin and cellular tissue	—	1	1	0.8
Respiratory System	—	1	1	1.0

V. Measures against Rodents.

(1) Steps taken for detection of rodent plague.

(a) In ships in the Port.

On only a small number of the cargo vessels entering from foreign—and all were carefully inspected—was it necessary to take special measures of rat repression. This is best illustrated by the fact that of the 716 rats recovered by trapping and fumigation, 422, or approximately 60%, were obtained from 21 ships. The greatest number obtained from any one ship was 88.

The practice of instituting thorough measures for the detection of rats in cargo vessels, as soon as possible after arrival, upon the undisturbed surface of the cargo prior to commencement of discharge, has again proved a valuable guide as to the prevalence of rats on board. It has, therefore, often been possible to advise the ship owners, or their local agents, of the need to fumigate the vessel well in advance. The work has thus been put in hand with a minimum of delay immediately following completion of discharge.

Of the 17 fumigations carried out at the port in 1949, four were at the request of this Authority in respect of ships which showed moderate to pronounced evidence of rat activity, although in possession of valid deratisation or deratisation exemption certificates. In each instance the owners readily complied.

TABLE E.

Measures of rat destruction on PLAGUE infected or suspected vessels or vessels from plague infected ports.

No. of such vessels arriving	Vessels fumigated by SO ₂		Vessels fumigated by HCN.		Trapping Poisoning		No. where no rat measures were required	Total No. of rats killed
	No.	Rats killed	No.	Rats killed	No.	Rats killed		
45	—	—	—	—	15	70	30	70

(b) *On quays, wharves, etc.* (See Table E.2).^{*}

Mention was made in last year's annual report that treatment merely by pre-baiting and poisoning was not altogether satisfactory as a method of rat repression and this view is supported to some extent by the marked increase in the number of rats caught by trapping—2,042 during the first eleven months of the year. (In December pre-baiting and poisoning was again reverted to on the recommendation of the Ministry of Agriculture and Fisheries, Infestation Branch).

Apart from the table, a clearer indication of the results of trapping and poisoning is conveyed by the accompanying graph.

The repression and control of rats is an important branch of public health work, and the most successful means of destroying the vermin should always be the one employed. Where trapping is found to be successful then it should be used. On the other hand, if pre-baiting and poisoning is satisfactory it should be maintained. When the alternation of these two methods at fairly frequent intervals is productive of good results, then such an arrangement should be adopted.

There is need for flexibility in the methods of treatment to suit different areas and to deal with the different species of rats. Only by the continued application of the methods that produce the best result can we hope to keep these destructive and health endangering pests under control.

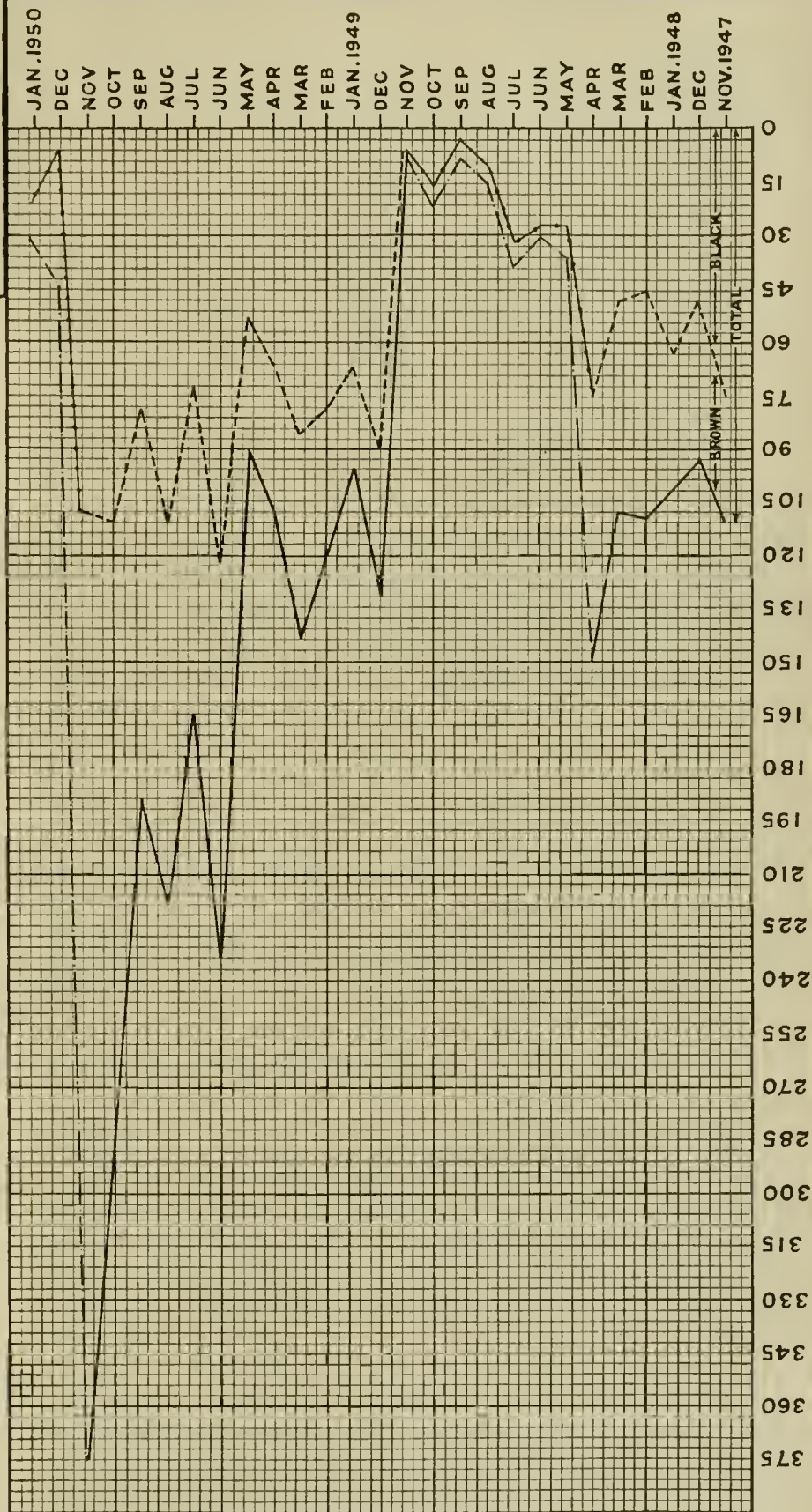
Periodical inspections of factories and mills occupied by private concerns have regularly been carried out. Most of these have annual contracts with firms who undertake rat repression. When inspections have shown the degree of infestation to be unsatisfactory the managements concerned have been requested to take the necessary measures of repression.

(2) *Measures to prevent the passage of rats between ships and shore.*

- (i) All vessels from infected or suspected ports are required to attach efficient rat guards to the mooring ropes.
- (ii) Suitable lengths of tarred hessian are wrapped around moorings, outside the leads, where the standard types of rat guards are not available.

RATS RECOVERED-DOCK AREA. NOV 1947-JAN 1950

REPRESSION BY TRAPPING
 BLACK -----
 BROWN -----
 REPRESSION BY POISONING
 BLACK -----
 BROWN -----



(3) *Methods of deratisation.*

(a) *On ships.*

Fumigation with hydrogen cyanide gas is always recommended. During the year, all vessels requiring fumigation were treated with this method

(b) *Premises within the vicinity of docks or quays.*

In all premises where rat activity is discovered frequent pre-baiting, poisoning and trapping is carried out.

(4) *Measures taken for the detection of rat prevalence in ships and on shore.*

As outlined in (1) (a) above, routine inspection is made for signs of rat activity on the undisturbed surface of cargoes prior to discharge. Follow up inspection, including sprinkled sand tests, are subsequently carried out. On shore, regular inspection of all premises and waste ground is made, particular attention being given to premises where foodstuffs are stored.

(5) *Rat-proofing.*

(a) *To what extent are docks, wharves, warehouses, etc., rat proof?*

The majority of docks, wharves, warehouses and private establishments within the dock area are of efficient rat-proof construction.

(b) *Action taken to extend rat-proofing.*

(i) *In ships.*

When rat-proofing could effectively be carried out without extensive structural alterations, the owners were recommended to do this work. In many ships, rat-proofing was found to be particularly necessary in respect of provision storerooms. In each case, the recommendations were complied with.

(ii) *On shore.*

Whenever structural alterations were made to existing buildings, steps were taken to ensure that effective rat-proofing was incorporated. All new constructions during the year were similarly dealt with.

Rats destroyed during the year—1949. On Vessels.

TABLE F.

Number of Rats	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total in year
Black	130	66	35	194	24	44	25	43	8	63	35	49	716
Brown	—	—	—	—	—	—	—	—	—	—	—	—	—
Species not recorded	—	—	—	—	—	—	—	—	—	—	—	—	—
Examined	104	45	35	83	14	38	24	19	7	47	31	35	482
Infected with plague	—	—	—	—	—	—	—	—	—	—	—	—	—

Rats destroyed during the year—1949. On Docks, Quays, Wharves & Warehouses.

TABLE G.

No. of Rats	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total in year
Black	68	78	85	65	52	122	71	110	79	110	104	5	949
Brown	28	43	58	44	38	113	94	110	110	190	270	40	1,138
Species not recorded	—	—	—	—	—	—	—	—	—	—	—	—	—
Examined	46	70	131	73	82	80	44	60	87	167	216	—	1,056
Infected with plague	—	—	—	—	—	—	—	—	—	—	—	—	—

TABLE H.
Deratisation Certificates and Deratisation Exemption Certificates issued during the year—1949.

Net Tonnage	No. of ships	No. of deratisation certificates issued after fumigation with:—			After trapping, poisoning, etc.	TOTAL	No. of Deratisation Exemption Certificates	TOTAL certificates issued
		H.C.N.	Sulphur	H.C.N. and Sulphur				
Ships up to 300 tons	2	—	—	—	—	—	2	2
from 301/1,000 tons	25	—	—	—	—	—	25	25
" 1,001/3,000 "	26	5	—	—	—	5	21	26
" 3,001/10,000 "	95	13	—	—	—	13	82	95
" over 10,000 tons	—	—	—	—	—	—	—	—
Totals	148	18	—	—	—	18	130	148

VI. Hygiene of Crews' Spaces.

The 924 visits and 4,667 revisits which were made to foreign-going and coastwise vessels during the year is an indication of the close attention that the port health inspectors give to matters of hygiene of crew accommodation, particularly in British ships.

Table J—(1)

Foreign-going Ships				British		Foreign	
				s.s.	m.v.	s.s.	m.v.
No. of revisits to vessels in dock by P.H.I.	...	...	...	1,565	637	707	339
No. of vessels reported defective	...	...	...	166	38	16	1
No. of vessels—defects remedied	...	...	...	145	34	16	1

Coastwise Vessels				British		Foreign	
				s.s.	m.v.	s.s.	m.v.
No. of revisits to vessels in dock by P.H.I.	...	...	...	673	577	109	60
No. of vessels reported defective	...	...	...	42	6	—	—
No. of vessels—defects remedied	...	...	...	41	6	—	—

Unfortunately, as the tabulated figures show, dirt and vermin defects are still unsatisfactory, and proportionately much higher in British vessels than in those of other nations.

There are several reasons for this, but an outstanding factor is the apparent indifference of British ratings to the cleanliness of their own berths, and to the accommodation in general. They do not appear to appreciate the benefits of hygienic surroundings. Stricter discipline and supervision coupled with planned efforts to instil into the men the principles of marine hygiene might well produce the desired results.

Two British ships were found to have accommodation which did not conform to the revised standards of crew accommodation recommended by the Ministry of Transport. These were reported to the local senior surveyor of the ministry for further action. The ships proceeded from Avonmouth to other United Kingdom ports and in each case the Port Health Authority concerned was advised.

Notices concerning defects other than of original construction were sent to the appropriate Port Health Authorities and subsequent replies received from them indicated that these defects had been remedied.

Reports concerning unsatisfactory drinking water supplies were received in respect of two ships which arrived at Avonmouth docks coastwise from another United Kingdom port. These reports were confirmed on analysis of the water samples taken from the two ships. In both cases the tanks were cleansed and replenished with fresh water supplied from the dock mains.

The storage of fresh water in the peaks and double bottom tanks has become more prevalent during recent years. This water, often from a doubtful source, and intended for washing purposes only, is pumped to gravitational supply tanks and is then drawn off from taps situated in the galley, pantry, wash places, etc. There is always the temptation to use this water for drinking purposes as it is more easily obtained than the proper drinking water which must invariably be pumped by hand from the domestic tanks. Moreover, with dual supply systems such as these, genuine mistakes commonly occur.

In the late summer an outbreak of a mild form of enteritis among the ratings of a vessel homeward bound was investigated and it was found that the men had mistakenly used the washing water in their wash place for drinking purposes. The source of the water in this instance was a polluted navigable river in South America. To avoid such an occurrence and prevent confusion when dual supplies are available, it is now recommended to ship masters, when appropriate, that notices of a durable nature indicating that the water is unfit for drinking should be secured over the taps supplying such water.

Analysis of action taken.

TABLE J (2).

FOREIGN-GOING			No. Defects			No. Defects reported by For'd Notices, etc., to			No. Ships	
Hygiene of Crew Spaces										
			Found	Rem'd	Not Rem'd	Other PHA's	M.O.T. Surv'r	Owner Master	British	Foreign
Orig. Const.	...	...	27	11	16	8	13	16	6	1
Wear and Tear	...	...	229	197	32	29	3	55	69	1
Dirt and Vermin	...	...	650	632	18	20	—	44	178	17
No. of Notices served on			...	Owner/Master 23			B.O.T. 2		Forward 13	

COASTWISE			No. Defects			No. Defects reported by For'd Notices, etc., to		No. Ships		
Hygiene of Crew Spaces										
			Found	Rem'd	Not Rem'd	Other PHA's	M.O.T. Surv'r	Owner Master	British	Foreign
Orig. Const.	...	...	—	—	—	—	—	—	—	—
Wear and Tear	...	...	12	7	5	5	—	5	5	—
Dirt and Vermin	...	...	101	101	—	—	—	1	45	—
No. of Notices served on			...	Owner/Master 2		B.O.T. —		Forward 1		

HYGIENE OF CREW'S SPACES

Classification of Nuisances.

TABLE J (3).

Nationality of Vessel	British	Other Nations	TOTALS
No. inspected during the year ...	1,139	400	1,539
Defects of original construction ...	24	3	27
Structural defects through wear and tear ... ?	240	1	38
Dirt vermin and other conditions prejudicial to health	713	38	751

Dock Sanitation.*(a) Factories and Workplaces.*

A comprehensive survey of factories and workplaces within the dock area was completed during the year and particulars relevant to the work of this department were obtained and recorded. The survey revealed that these establishments were, for the most part, well maintained both in regard to repairs and cleanliness. In the case of two factories and one workplace action of an informal nature was taken, requiring that suitable and sufficient W.C. and washing facilities be provided. This work has been completed satisfactorily in two of these establishments and is now in progress in the third of them.

(b) Canteens.

It can again be reported that the standard of cleanliness continues to be satisfactory both in the Port of Bristol Authority's canteens and in those attached to mills and other industrial premises.

Extensions and alterations have been made to three of the latter, and new adjoining sanitary accommodation with modern fittings have been provided in each case. Progress is also being made in the construction of new canteens and sanitary accommodation in two other factories within the dock area.

(c) Public Conveniences.

There is no further development to report regarding the recommended construction of conveniences at the Royal Edward and Avonmouth Docks, referred to in the 1948 annual report. The existing conveniences have been given the required attention and, on the few occasions when it became necessary to report to the Port of Bristol Authority on matters of minor disrepair or unsatisfactory cleansing, the defects were promptly remedied.

No. of Routine Visits to:

<i>Premises in Dock Area</i>	<i>Dock Sanitation</i>	<i>Public Conveniences</i>	<i>Tip</i>	<i>Salvage Dumps</i>
1,358	813	1,137	41	1,228

(d) Refuse Collection.

During the year recommendations were made to the Port of Bristol Authority to the effect that the more frequent use of certain berths at the Royal Edward and Avonmouth Docks would justify the construction of refuse bays on quay sites adjoining these berths. The Authority approved these recommendations and new bays are to be provided. Larger bays are also to be provided at certain berths where the daily amount of trade refuse regularly handled is much greater in volume than can be deposited in the existing bays.

It is appropriate in this report again to refer to the advantages of an efficient system of refuse collection and disposal within a busy dock area. Such a system is particularly necessary in a dock where most of the waste products, quay side sweepings, etc., are of an organic and putrescible nature. Undoubtedly, since the inception of the present system of refuse collection there has been continued improvement. For example, despite the warm summer periods which have lately been experienced there have been no complaints about fly nuisances, or odours,—complaints which invariably arise as a result of inefficient and delayed disposal of refuse.

The City Cleansing Department reports that 3,089 loads of ship domestic and trade refuse were removed from Avonmouth dock alone during the year. In addition they have visited the ships daily to collect waste food, for treatment and disposal as animal feeding stuff.

VII. Food Inspection.

Despite the fact that the number of foreign-going vessels arriving during the year showed an increase compared with 1948, the amount of imported general foodstuffs decreased by approximately 178,000 tons. This is largely accounted for by the reduction in grain imports. Comparative figures for other food imports are variable but collectively do not show a marked increase or diminution over the preceding year. Frozen meat, canned meats and fresh fruits, for example, were altogether down by about 33,000 tons, whereas cheese, butter, lard, dried fruit and sugar imports showed an aggregate increase of about 44,000 tons.

Possibly owing to improved methods of handling and quicker dispatch of the fruit, a smaller quantity of over-ripe bananas was available this year for distribution to hospitals. However, by the kind co-operation of Messrs. Elders & Fyffes and the representative of the Ministry of Food it was still possible to send more than 16,000 lbs. of bananas to the various local hospitals.

Meats (Condemned).

TABLE K.

Description	Decomposition and Mould			Brine Stain			Contamination and Taint			Total		
	T.	C.	Q. lbs.	T.	C.	Q. lbs.	T.	C.	Q. lbs.	T.	C.	Q. lbs.
Mutton and Lamb	7	2	25	1	12	0 18				1	19	3 15
(Offal)	1	1	18							1	1	1 18
Beef Quarters	5	17	1 13			6				5	17	1 19
(Offal)	10	2	24							10	2	24
Veal	1	1	8							1	1	8
Pork		2	5								2	5
Other Meats							1	3	7	1	3	7
TOTAL	6	19	0 9	1	12	0 24	1	3	7	8	13	0 12

Canned Goods (Condemned).

TABLE L.

Description	Reason for Condemnation	Quantity (Tins)	T.	C.	Q.	Lbs.
Canned Fruit	Blown, burst, pierced, crushed	5,516	4	3	0	6
" Fish	and/or rust holed	276		2	0	26
" Jams	"	117		2	0	14
" Meats	"	409		4	3	13
" Soups	"	2,843	1	5	2	1
" Veg.	"	5			1	4
" Milk	"	26				20
TOTAL		9,192	5	18	1	0

Miscellaneous Foods (Condemned).

Description	Reason for Condemnation	T.	C.	Q.	Lbs.
Lard	Rancidity	1	4	2	0
Fruit Cake	Contamination	2	19	2	18
Dried Fruit	Insect infestation, mould, perished	4	8	3	13
Fresh Fruit	Decomposed	51	16	0	14
Flour	Mould, Contamination, Taint	53	2	2	0
Fresh Vegetables	Decomposed	324	10	2	3
Pickles	Decomposed		2	0	16
Rolled Oats	Rancidity	1	12	3	17
Custard Powder	Insect infestation			2	16
Rice	Insect infestation		1	0	0
Other Foods	Contamination			1	19
TOTAL		439	19	1	4

Particulars of Foods Detained for Reconditioning at Local or other Food Depots.

Description of Food	Quantity	Reason for Detention	Weight in Tons (approx.)
Cases Canned Fruit	7,900	Metallic Contamination ...	157
Cases Canned Meats	5,690	Spoilage	153
Sacks Flour	2,176	Contamination	136
Trays Fresh Grapes	7,000	Mould	57
Cheeses	257	Contamination	18
TOTAL	—		521

Routine inspection of the various food cargoes has been fully maintained and when considered necessary, samples of various consignments have been taken to check for purity, to ascertain whether the amount of preservatives used exceeded the quantity legally permitted, or whether the amount of metallic contamination was in excess of the recognised limits.

A consignment of canned tomato puree taken ex s.s. "Tacoma City" on 3rd February, 1949, was found to contain an excessive quantity of tin and the importers were notified that the puree was unfit for human consumption. Accordingly, they gave an undertaking to re-export the whole consignment. In due course it was shipped and returned to Australia, the country of origin.

Upon examination, a consignment of about 2 tons of mixed citrus peel taken ex s.s. "Ariguani," 6th June, 1949, produced in the British West Indies, was found to be affected with mould and fruit beetle infestation. In this instance the importers gave an undertaking that the peel would be disposed of for animal food. This was done under the supervision and to the satisfaction of the Health Authority.

Of the imported meat cargoes dealt with during the year one only calls for comment. On the homeward voyage a defect developed in the refrigeration system in one of the holds of the s.s. "Raranga." Upon discharge 1,720 quarters of beef from Australia were found to be affected with mould and decomposition in varying degree. These were detained for examination and reconditioning at the Docks under supervision of the port health inspectors.

The foregoing instances are a few of many in which special action has been taken in regard to imported foods; nevertheless they serve to illustrate that every effort is made to ensure that unsound food is not allowed to be disposed of for human consumption.

TABLE M.

Samples of Food sent for Examination at the Department of Preventive Medicine.

<i>Quantity submitted</i>	<i>Description of commodity</i>	<i>Examined for</i>	<i>Result</i>
4 samples	Tomato Puree	Metallic contamination	Unfit—excess tin
1 „	Blackcurrant Syrup ex Tasmania	Preservatives	Satisfactory
6 „	Beef Extract ex Australia	Purity	Satisfactory
2 „	Tomato Juice ex Australia	Preservatives	Satisfactory
2 „	Tomato Soup ex Australia	Preservatives	Satisfactory
4 „	Tomato Juice ex Australia	Metallic contamination	Satisfactory
	Flour and sacking ex S. Shed, Avonmouth	Purity	Unfit—for animal food
1 „	Slab cake ex Australia	Purity	Satisfactory
1 „	Tomatoes, peeled cut ex Casablanca	Metallic contamination	Satisfactory
2 „	Custard Powder ex Australia	Purity	Satisfactory
3 „	Pilchards in Tomato Sauce ex S. Africa	Metallic contamination	Satisfactory
1 „	Conc. Orange Juice ex Israel	Preservatives	{ Excess SO ₂ . Diluted prior to consumption
1 „	Conc. Grapefruit Juice ex Israel	Preservatives	
1 „	Cold Pressed Essential Orange Oil ex Israel	Preservatives	Satisfactory
1 „	Fruit Chutney ex Australia	Metallic contamination	Satisfactory
1 „	Sweet Fruit Chutney ex Australia	Metallic contamination	Satisfactory
1 „	Tomato Ketchup ex Australia	Preservatives	Satisfactory

Public Health (Cleansing of Shellfish) Act, 1932.**Public Health (Shellfish) Regulations, 1934.**

There are no shellfish beds or layings within the jurisdiction of the Bristol Port Health Authority. The supply of shellfish marketed in Bristol is obtained mainly from the following sources:—

Cockles from St. Clair, South Wales, and King's Lynn, Norfolk.

Escallops from Brixham, South Devon.

Mussels from Appledore, North Devon, and St. Clair, S. Wales.

Oysters from Cornwall, others from Thames Estuary and

Continental countries via London.

Winkles from Appledore, North Devon.

Whelks from King's Lynn, Norfolk.

Parrots (Prohibition of Import) Regulations, 1930.

During the year, five vessels arrived with nine birds of the parrot specie on board. Importation was prohibited under the regulations.

Medical Inspection of Aliens.*Seaport.*

A total of 177 aliens arrived at the Port in 1949. Of these 172 (including 29 stowaways who were refused permission to land by the Immigration Officer), were medically inspected and the remaining 5 were subjected to a detailed examination.

Airport.

A total of 40 aliens landed at the Airport during the year. All of these were medically inspected.

The Airport.

Thirteen aircraft from " foreign " arrived from time to time during the year; all were boarded and cleared by medical officers of the Port Department. None of the passengers or crew (a total of 139) was detained under the regulations. Aircrew surveillance, however, was continued where indicated in respect of aircraft from infected airports which proceeded to Bristol for the purpose of maintenance or repairs.

TABLE N.

MEDICAL INSPECTION OF ALIENS.

Annual return by the Medical Inspector of Aliens for the year ended 31st December, 1949.

	Total	Number inspected by the Medical Inspector	Number subjected to detailed examination by the Medical Inspector	Certificates Issued				Landing necessary for adequate medical examination	Transmigrants
				Lunatic, Idiot, or M.D.	Undesirable for medical reasons	Physically incapacitated	Suffering from acute infectious disease		
(a) Total number of Aliens landing at the Port ...	148	143	5	—	—	—	—	—	—
(b) Aliens refused permission to land by Immigration Officer ...	(stow-aways) 29	29	—	—	—	—	—	—	—
(c) Transmigrants ...	—	—	—	—	—	—	—	—	—
Total Aliens arriving at the Port ...	177	172	5	—	—	—	—	—	—

Total number of vessels carrying Alien passengers ... Inwards 74; Outwards 39
 Number of vessels dealt with by the Medical Inspector ... Inwards 74; Outwards —

MEDICAL INSPECTION OF ALIENS. AIRPORT.
Annual return by the Medical Inspector of Aliens for the year ended 31st December, 1949.

TABLE O.

	Total	Number inspected by the Medical Inspector	Number subjected to detailed examination by the Medical Inspector	Certificates Issued					Transmigrants
				Lunatic, Idiot or M.D.	Undesirable for medical reasons	Physically incapacitated	Suffering from acute infectious disease	Landing necessary for adequate medical examination	
(a) Total number of Aliens landing at the Port ...	40	40	—	—	—	—	—	—	—
(b) Aliens refused permission to land by Immigration Officer ...	—	—	—	—	—	—	—	—	—
(c) Transmigrants ...	—	—	—	—	—	—	—	—	—
Total Aliens arriving at the Port ...	40	40	—	—	—	—	—	—	—

Total number of aircraft carrying Alien passengers Inwards 10; Outwards 30.
 Number of aircraft dealt with by the Medical Inspector ... Inwards 10; Outwards —.

V.

SPECIAL REPORTS

1. BREAST FEEDING.
2. PREVENTIVE MEDICINE LABORATORIES.

1. BREAST FEEDING.

By Dr. A. I. Ross and Dr. G. Herdan.

(The following is an extract from a paper written by Dr. A. I. Ross, Chief Assistant Medical Officer, Maternity and Child Welfare, Public Health Department, Bristol, and Dr. G. Herdan, Lecturer in Medical Statistics, University of Bristol, following an enquiry into breast feeding in Bristol.)

Purpose and Method of Survey.

The importance of breast feeding has always been emphasised and the benefits to both mother and child from breast feeding are well recognised.

In recent years several observers have stated that breast feeding is increasingly being replaced by artificial feeding. It was thought desirable to find out what was happening in Bristol.

As well as this information several other most interesting facts came to light.

District health visitors followed up for six months babies born in Bristol in November, 1947, and May, 1948, and completed a report on each child. Reports were returned in respect of 1,047 babies. Twelve died and five left the city.

Information on the years 1929/1930 and for 1949 was extracted from 500 health visitors' cards of babies born in each year, selected at random. Unfortunately it was not possible to obtain information about earlier years as the cards had been destroyed during the war.

The results of a small investigation of 137 cases in 1942 are included.

1. The extent of breast feeding of Bristol Babies compared with that of twenty years ago.

Table 1 compares the duration of breast feeding in 1929/30, 1942, 1947/48 and 1949 (Bristol only).

Table I. Breast Feeding in Bristol.

	1929/30	1942	1947/48	1949
Total number of cases	500	137	1,047	500
Entirely breast fed at 2 weeks	—	85%	81.5%	85.6%
at 4 weeks	85.6%	74%	66.5%	74%
at 3 months	77.2%	55%	44.5%	36.2%
at 6 months	—	—	32.2%	—

The change during this period is quite apparent. Breast feeding has decreased considerably.

The drop in breast feeding in Bristol has taken place in spite of

the increased number of babies attending infant welfare clinics. These changes are shown in the table given below.

Table II.

Year	Birth Notifications	New patients at I.W.C. Clinics	% of babies attending I.W. Clinics	Total No. of attendances under 1 year	Average No. of attendances per child
1930	6,530	1,763	27.0%	23,640	13.4
1938	6,714	4,787	71.4%	42,308	8.8
1948	8,485	7,050	83.1%	78,218	11.1

The decrease of breast feeding has not been accompanied by a rise in deaths of babies from gastro-enteritis. In 1930 the infant mortality rate in Bristol was 58.3 per 1,000; deaths from gastritis and diarrhoea accounting for 3.41 per 1,000. In 1948 the corresponding rates were 24.5 per 1,000 and 0.26 per 1,000 respectively.

(2) The Incidence of Breast Feeding of Babies delivered in the three Bristol Maternity Hospitals, in Nursing Homes and at Home. (See Table II, which gives the distribution of cases with regard to both place of delivery and duration of breast feeding).

The 67.7% incidence of breast feeding at two weeks among nursing home patients, compared with the average of 81.5% at two weeks for the whole series, and the similarity between the figure for nursing home patients (33.5%) and the average figure (32.2%) at six months, is in agreement with the findings given in the report "Maternity in Great Britain." We may take it that many of these patients decided against breast feeding in the first instance, but those that started persevered better than those whose babies were born at home and hospital.

The application of the Chi-Square test shows no significant difference in the duration of breast feeding according to the place of delivery; nor is there a significant difference between the percentage of cases in which lactation was established when delivery took place at home (85.5%) or in two of the maternity hospitals of the city: "A"—83.6%; "B"—81.1%. Hospital "C" shows a significant difference with 87.6%.

The similarity of incidence of breast feeding of babies born at home and in hospital is in agreement with "Maternity in Great Britain," where 87% of mothers delivered in hospital established lactation compared with 85% of mothers delivered at home. On the other hand Dummer (1949), and Hughes (1948), found decreased breast feeding among babies born at home. Dummer showed that 83.5% of babies born in a county maternity home were wholly breast fed at 14 days. The corresponding district figure was 76.9%. In Hughes' series, 80% of babies delivered in hospital were breast fed at two weeks and 68% of these delivered by midwives.

Our finding do not support the statement in the Ministry of Health Report on the "Breast Feeding of Infants" (1944) that 95% of babies born on the district are wholly breast fed when the midwife leaves while only 80% of babies leave hospital fully breast fed.

Table III.

Incidence of Breast Feeding—Babies Delivered in Bristol.

(The figures in the upper rows are the number of cases according to place of delivery and type of feeding. Those in the lower rows express these numbers as percentages of the totals in the bottom row).

Period			At 2 weeks							At 4 weeks						
Place of Delivery			At Home	Nursing Homes	Hospital			Total	At Home	Nursing Homes	Hospital			Total		
Breast Fed	No.	%			A	B	C				A	B	C			
			316 85.5	108 67.7	92 83.6	263 81.1	74 87.6	853 81.5	252 68.3	97 60.6	72 65.4	215 66.4	59 70.3	695 66.5		
Partially Breast Fed	No.	%	25 6.5	18 11.6	9 8.1	35 10.6	8 9.9	95 9.0	45 11.7	11 7.1	18 16.3	35 10.9	11 13.5	120 11.4		
Artificially Fed	No.	%	29 7.9	32 20.6	9 8.1	27 8.1	2 2.5	99 9.5	73 19.8	50 32.2	20 18.1	73 22.5	13 16.0	229 22.1		
Total			370	158	110	325	84	1,047	370	158	110	323	83	1,044		

Period			At 3 months							At 6 months						
Place of Delivery			At Home	Nursing Homes	Hospital			Total	At Home	Nursing Homes	Hospital			Total		
Breast Fed	No.	%			A	B	C				A	B	C			
			160 43.5	67 44.5	44 40.0	151 47.0	39 48.1	461 44.5	122 33.2	52 33.5	32 29.0	103 32.3	23 28.4	332 32.2		
Partially Breast Fed	No.	%	33 8.9	10 5.8	15 13.6	16 5.0	7 11.1	81 7.7	22 6.0	14 9.0	12 11.0	16 5.0	1 1.2	65 6.3		
Artificially Fed	No.	%	174 47.4	79 51.0	51 46.3	154 47.9	35 43.2	493 47.6	222 60.0	88 56.7	66 60.0	200 62.6	47 58.0	623 60.3		
Total			367	156	110	321	81	1,035	367	155	110	319	81	1,032		

- (3) It was found that Mothers belonging to the Registrar-General's Classes I and II appear to Breast Feed their children longer than Mothers belonging to Classes IV and V.

* (The Registrar General divides the population into five classes:—

- Class I—Professional and managerial workers.
 „ II—Intermediate between I and III.
 „ III—Skilled workers.
 „ IV—Intermediate between III and V.)
 „ V—Unskilled workers.

- (4) The average weight and the distribution of weights of Breast Fed and Artificially Fed Babies.

The question of whether breast feeding is more suitable for the health of the child than is artificial feeding, opens a very wide field for investigation. In the present report, this question has been dealt with only from one aspect, that is, the weight increase of the child up to six months. The average weight at six months of babies breast fed during the whole time, and artificially fed at least from the second week on, does not differ very much. The average weight for breast fed children is 273ozs.; and for artificially fed children 274ozs.; rounded off to the nearest ounce. That difference cannot be regarded as significant in the present case. These weights are similar to those found in London by Gore and Palmer (1949):— boys 17.6lb; girls 16.5lb.; average 273ozs. The average birth weights of the breast fed and artificially fed groups of babies were also very similar:— breast fed 118ozs, and artificially fed 117ozs. It seems of interest, however, to compare the distribution of the weights and not to be content with only the comparison of the averages. The following table gives the weight distribution for breast fed children and artificially fed children.

Table IV.
Comparative weights of babies at 6 months.

Weight in ounces	Breast fed at 6 months		Artificially fed from 2 weeks	
	Number	%	Number	%
Under 200	4	1.2	5	5.5
200 — 210	15	4.5	5	5.5
220 — 240	19	5.7	12	13.3
240 — 260	86	25.9	12	13.3
260 — 280	74	22.3	15	16.6
280 — 300	71	21.4	15	16.6
300 — 320	35	10.6	9	10.0
320 — 340	16	4.6	12	13.3
340 and over	12	3.6	5	5.5
	332	=100.0	90	=99.6%

In graphical form we obtain the following picture of the weight distribution when plotted against the weight. This graph brings out the interesting fact that there is a characteristic difference between the two distributions. In the distribution of weights of breast fed children the weights are closely packed around the average: in the distribution

of weights of artificially fed children, the curve is flattened out, which means less close packing around the average, but increase in the number of extremes.

(5) The Cause of Premature Weaning.

Reasons for premature weaning were obtained only in respect of the 622 babies born in May, 1948.

Grouping the reasons we find the following percentage distributions:—

(i) <i>Condition of the infant</i> ...	5.5%	(including the prematurity and twin birth ...	3.2%)
(ii) <i>Health of Mother</i> (Other than obstetrical)	12.2%		
(iii) <i>Breast Condition</i> ...	5.5%	(Abscess ...	1.7%
		Cracked nipples	1.2%
		Inverted „	2.2%)
(iv) <i>Obstetrical Conditions</i> ...	4.7%		
(v) <i>Environment</i> ...	5.9%	(Incl. mother working ...	2.2%)
(vi) <i>Other Maternal Reasons</i>	6.0%	(Incl. refusal to feed child ...	2.2%)
(vii) <i>Husband demanded the child should be artificially fed</i> ...	0.2%		
(viii) <i>Breast milk failed for no obvious reason</i> ...	64.4%		

The large number of cases of failure for no obvious reason is striking. It compares with the 40% of mothers who ceased to breast feed for this reason in the study of Robinson (1943) of premature weaning and the 51% of Dummer (1949). The mother working was a factor in only 2.2% of the cases. This is very much lower than the results given by Neale et al. (1943) for Birmingham, when in 1938, 15%, and in 1941, 11% of mothers abandoned breast feeding because they went to work.

(6) The kinds of Artificial Foods used.

The various types of artificial milks given were as follows:—

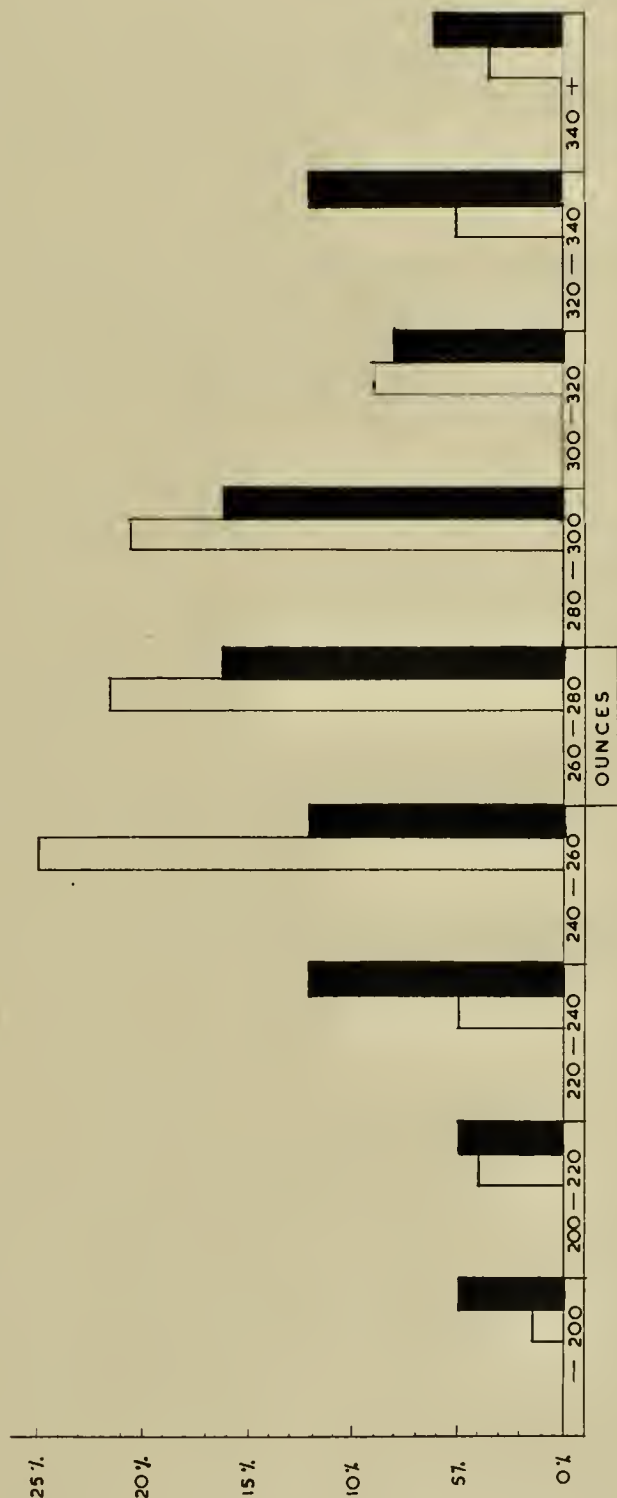
National Dried Milk	...	268	63%
Cow's Milk	...	82	19%
Proprietary Milk Foods	...	74	18%

In many cases several of these milk foods were given to the same child on different occasions.

It will be seen that the place of breast milk has been taken by National Dried Milk. Indeed at 10½d. for the equivalent of seven pints of liquid cow's milk it is difficult for mothers to resist its use, although of course, it is the same price as the seven pints per week

WEIGHT OF BABIES AT SIX MONTHS

WHOLLY BREAST FED
ARTIFICIALLY FED
AT TWO WEEKS



priority milk for under fives. In Bristol, as elsewhere, it is distributed at infant welfare clinics and private shops, and is very easily obtainable by any mother.

SUMMARY.

- (1) The incidence of breast feeding in Bristol in 1929/30, 1942, 1947/48 and 1949 is compared. There has been a considerable reduction in breast feeding in Bristol since 1929/30. In 1929/30, 77% of babies were breast fed at three months compared to 36.2% in 1949.
- (2) The results of a breast feeding survey of 1947/48 are analysed. Fewer patients delivered in nursing homes had established lactation at fourteen days than patients delivered at home and in hospital. At six months the incidence of breast feeding in these groups was the same. The duration of breast feeding did not vary according to whether the patient was delivered at home, hospital or nursing home.
- (3) Mothers belonging to the Registrar-General's Classes I and II appear to breast feed their children longer than mothers belonging to Classes IV and V.
- (4) The distribution of weights at six months of artificially fed babies differs in a characteristic way from that of breast fed babies, and accords an indication that breast feeding is preferable for the majority of children.
- (5) 64.4% of mothers weaned their babies because their breast milk failed for no obvious reason. The mother going to work was responsible in only 2.2% of cases.
- (6) Of the various artificial milks used, National Dried Milk was given in 65% occasions; cow's milk 19% and proprietary milks and foods 18%.

References.

- Dummer, F. H. M. (1949) B.M.J. 2:14.
- Gore, A. T. and Palmer, W. T. (1949) Lancet 1:385.
- Hughes, E. C. (1948) B.M.J. 2:597.
- "Maternity in Gt. Britain." (Joint Comm. of the R. C. of Obstetricians, and Gynaecologists and the Population Investigation Committee, London. Oxford University Press, 1948.)
- Ministry of Health (1944) "Reports on Public Health and Medical Subjects No. 91." H.M.S.O., London.
- Neale, A. V. Cassie E., Baird, F. and Pierce, M. (1942) Arch. Dis. Child 18:59.
- Robinson, M. (1939) Arch. Dis. Childhood. 14:259.

2. THE PREVENTIVE MEDICINE LABORATORIES IN 1949

By Dr. K. E. Cooper (Director of Laboratory)

Organisation.

This year has seen the implementation of many features inherent in the National Health Service inaugurated last year. After a number of delays, which were necessary in order to arrange detailed plans and facilities, the smooth transfer of hospital pathology and general practitioner work to the hospital laboratories was accomplished by November the first. The breaking up of the conjoined services of Bacteriology and Pathology has been no easy task, and thanks are due to the pathologists and their associated staffs, for the way in which they have undertaken this transfer. Our thanks are also due to the large number of technical staff who have accepted cheerfully, transfer not only to another employing authority, but in many cases movement to another laboratory, simultaneously with the transfer of the particular work on which they were chiefly engaged. The main structure of the new laboratory services is now in existence, and each laboratory should now be able to plan for the future with its own controlling authority.

As a result of the amputation of clinical pathology, the central Preventive Medicine Laboratory at Canynge Hall is engaged in the process of trying to heal the resulting wounds. The transfer of three medical staff (one retained for part-time duties), and of fifteen technical staff (three Fellows, three Members and six Students of the Institute of Medical Laboratory Technology) was largely compensated for by the transfer of the work they were doing to the hospitals concerned. The expansion of laboratory service also resulted in the further loss (to take up other appointments) of two medical, three non-medical staff and five Technicians (two Associates, two Members and one Student of the Institute. Only three of the five staff vacancies have yet been filled, and the five technicians' vacancies have had all to be filled by student technicians. The other staff remaining at Canynge Hall are three academic staff and twelve technicians, of whom only three are fully qualified. Thanks are due to the staff and senior technicians for carrying this increased burden of teaching and of training junior assistants, while still maintaining a smooth and efficient routine service.

Laboratory examinations.

Because of the transfer of work from the department it is valueless to compare total numbers with previous years. Examination of figures item by item, however, show only minor differences from last year.

Slight decreases in examinations for throat infections continue the recent tendency, since the introduction of large scale diphtheria immunisation and increased chemotherapeutic treatment. The apparent decrease in examinations for tubercle bacilli is largely due to many specimens being examined at the hospitals. Some outbreaks of food poisoning and dysentery and one of typhoid during the year explain the increased number of faecal specimens examined. Designated milk examinations are increased because the laboratory, now working on a regional basis, has undertaken work for Gloucestershire. Some decrease in ice-cream

sampling was inevitable because of the increased attention devoted to restaurant hygiene and the examination of other foodstuffs. Examination for venereal diseases are slightly decreased, mainly for gonococcal infections. The use of the quantitative blood tests for syphilis and of cultural methods for gonorrhoea, though more laborious than the older tests, are being fully justified by the increased accuracy and information they yield, and must have contributed to the preventive and curative work of the Venereal Diseases Department.

Bacteriological Media. Though there has been little alteration in the amount of routine examinations done by the staff in the department, compared with last year, except for the increase in the milk section, very much increased activity has been called for in the media section. This is because the hospital laboratories at Southmead, Frenchay, Ham Green and the Royal Infirmary, have all increased their demands, and in the absence of local facilities for media preparation, this department has continued to provide it. Future plans, it is hoped, will enable the hospitals to make at least the simpler bacteriological media that they use, though the more specialised public health and hospital media may have to be provided as now. Increased university classes—medical, science, veterinary and post-graduate—will in the future, and in fact already do, throw an increased burden on this section. This provision is not included in the unit system used for assessing the routine work done, as the media is utilised by other laboratories for work they do. A separate system of charges has therefore had to be instituted to cover this cost to the University. These charges have only amounted to one quarter of the commercial charges which are made by manufacturing firms, and it is hoped we shall be able to continue at this economical rate, though accommodation difficulties will not allow this provision to be any further expanded.

Diphtheria. The graph of positive diphtheria patients and carriers published in last year's report has continued its downward trend. Only three positives have been detected this year—all in the first quarter: two mitis and one atypical type. The more severe gravis, and hitherto predominant intermedius, have thus been completely absent for over a year—a remarkable tribute to the value of immunisation.

Enteric Fever. One case of paratyphoid B occurred in a schoolboy infected in France.

A small outbreak of Typhoid occurred in the area. Four persons who drank water from a polluted stream were infected, and one of these died. The pollution was traced to a carrier in a private hospital. Two secondary cases, one inside the hospital and one out also occurred. The work on the outbreak was reported at a conference of the Royal Sanitary Institute on March 24th, 1950 and is to be published in the Journal of the Institute. All strains of typhoid were phage type A.

Food Poisoning. An increased number of Salmonella infections occurred; 104 cases in all compared with 39 in 1948. The types were:—*S. typhi* murium 62, *S. enteritidis* 33, *S. thompson* 5, *S. St. Paul* 2, *S. montivideo* 1, *S. menston* 1.

The reintroduction of dried eggs was probably responsible for the last named types. Some of the *S. thompson* cases were traced to an infected brawn. Most of the *S. enteritidis* cases occurred in a children's home which suffered from an explosive outbreak. Many of the isolated *S. typhi* murium cases were traced to duck eggs—and some of the others to products in which duck eggs had been used, *e.g.* a chocolate pudding in one case. Others were concerned with brawn, meat pies, jellied products, but many were untraced.

Bacterial Dysentery.—Infection by *Shigella Flexner* was found in 11 cases mostly confined to mental hospitals.

A number of outbreaks due to *Shigella Sonne*, occurred towards the end of the year, involving in all 68 persons. Nursery schools, babies' homes and children's hospitals were involved.

Public Health Laboratory Service.

A series of central reference laboratories has been organised by this service—a number of them at Colindale—for the identification of virus and bacterial strains. Much use has been made of these laboratories by sending bacterial strains and patients' sera for examination. The identification of *Salmonella* food poisoning strains, and phage typing of strains of typhoid have been mentioned elsewhere in this report. Cases of two rare diseases have been found in Bristol with this aid: -*Leptospira canicola* fever (the results on which were published by Campbell (1950) *Brit. Med. Journ.* 1. 336.) and Q fever (*Rickettsia burneti*)—(published by Mac Callum (1949) *Lancet.* 1. 1026).

Restaurant Samples. Regular sampling of crockery, eating utensils, washing up water, tea cloths, etc. has been continued throughout the year. Kitchen hygiene is far from satisfactory, and it is to be hoped that great improvement will be made in the near future. Only 66% of the utensils examined achieved a standard of less than 1,000 organisms per utensil. This is ten times as many organisms as is allowed as a recommended standard in the U.S.A., or this country. In addition 6.1% showed more than ten *B.coli* per utensil. Only 30% of the rinse waters used had counts below 100 per ml., and 59% had counts over 1,000 per ml. Also 30% showed more than 10 *B.Coli* per ml. Tea cloths used to wipe crockery are one of the biggest sources of danger—direct cultures giving profuse growths of organisms in 35% of samples.

The high incidence of food poisoning and bacterial dysentery this last year is probably not unconnected with the bad hygienic conditions prevailing in cafes, restaurants and canteens.

Milks.

Heat treated milks and the condition of utensils have continued to improve, but the position in regard to raw milks is little changed. Results are given below.

HEAT TREATED

FAILURES of Short Methylene blue test :—

	1949	1948	1947
Pasteurised Milk—Official Tests ...	2.35%	1.28%	8.85%
„ „ —School supplies ...	0.00%	2.14%	5.58%
Heat treated milks ...	1.08%	1.70%	2.63%
Total ...	1.19%	1.68%	5.85%
Samples examined ...	840	716	631
Out of 253 Phosphatase tests—Official samples ...	7 failed		
Out of 217 Phosphatase tests—school samples ...	0 failed		
Out of 370 Phosphatase tests—heat treated milks	8 failed		
Out of 22 Phosphatase tests—plant tests ...	1 failed		
	862	716	16

RAW MILKS

	1949	1948	1947
Failures of either } Long Methylene } Blue or B. coli test }	Tuberculin tested 23.8%	16.4%	35.4%
	Accredited ... 25.7%	24.2%	25.9%

UTENSILS

Bottle rinses graded 42% (1948—16.2%) in grade A, with a count of less than 5 organisms per ml. of volume. The B. coli test was not satisfactory in 10% (1948—13%). Churns did not show very different figures but the number examined was small.

Ice Creams.

Ice cream examinations continue to show improvement on previous years. This year, this is true whether we evaluate the position by means of the Ministry of Health tests based on the methylene blue reaction, or on the Bristol tests based on bacterial counts and the presence of B. coli. A quarter to a third of the ice creams still give satisfactory Bristol tests but fail the methylene blue test, though agreement was obtained in 62.7%.

Ministry of Health Grades	BRISTOL REPORT					
	Good	Satisfactory	Doubt.	Poor	V. Poor	Totals
1	69	14	4	5	0	92
2	32	8	1	1	0	42
	123=51.4%		5=2.1%	6=2.5%		=56%
3	30	13	4	3	3	53
4	17	5	9	7	14	52
	65=27.2%		13=5.4%	27=11.3%		=43.9%
Totals	148	40	18	10	17	233
	78.6%		7.5%	13.8%		=99.9%

	1947	1948	1949
Ice cream failing both tests	47.5%	26%	11.3%
Ice cream failing Bristol	50.5%	28%	13.8%
Ice cream failing Ministry	69	66	43.9

Examination of Foodstuffs.

Over 200 culture examinations for bacteria in foodstuffs have been made during the year, either for pathogenic organisms or for evidence of dangerous contamination. Over 100 blocks of meat have been sectioned, and more than 250 films examined for human pathogens. Confirmation of infection with cysticercosis bovis—the source of one species of human tapeworm—was obtained in over 200 samples of meat and hence precautions taken to destroy this parasite. Other types of food examined included fish, anchovy paste, eggs, cheese, fermented milk, meat pastes, pies, brawns, sausages, tomato juice, puree and ketchup, custard tart, trifle, honey, puddings, peas, beans, cabbage, salad cream.

Teaching.

Undergraduates. Science Bacteriology. The subsidiary B.Sc. class consisted of twelve. Arrangements have been made, subject to obtaining adequate staff, for bacteriology to be taken as a main subject next year in a Science degree with General Honours, by either Science or Medical students.

The Medical Bacteriology course (as part of Pathology and Bacteriology) for M.B., Ch.B. was given by the department to 60 students.

Postgraduates. D.P.H. Bacteriology. Two students took this course. One postgraduate doctor took the subsidiary science course and additional laboratory training and one postgraduate veterinary student pursued work for an M.Sc. degree.

Staff - higher degrees. Mr. Linton completed his thesis on "Studies in Antiseptics" and was awarded the M.Sc. degree. Dr. Mayr-Harting completed her thesis on "Pseudomonas pyocyanea" and was awarded the Ph.D. degree.

WATERS

	37 deg. C Count			22 deg. C Count			Presumptive Coli				Faecal I	Total
	0-100	100-1000	>1000	0-200	200-1000	>1000	0	1-10	11-100	>100		
CITY MAINS	105*	1	0	104	0	1	112	0	0	0	0	112
Bristol other supplies	0	0	7	0	0	7	0	0	0	7	5	7
WEST GLOS. MAINS	43	2	1	40	2	2	46	2	0	0	0	48
Glos. other supplies	5	2	3	1	3	5	3	1	0	5	6	10
PORTISHEAD MAINS	24	0	0	20	2	1	24	0	0	0	0	24
Som. other supplies	77	15	13	53	15	36	50	17	29	10	45	106
Miscellaneous, ships, baths, etc.	6	5	4	7	1	7	11	3	2	1	3	17

* Where figures in a section add up to less than the total given in the last column, the difference is due to the omission of the particular test on certain samples.

The mains waters were all satisfactory throughout the year for Bristol, Gloucester and Somerset.

Technicians. Mr. Harber was elected a Member of the Council of the Institute of Medical Laboratory Technology. Mr. Harber, Mr. Guise, and Mr. Knight continued to act as tutors for the technology classes in Bacteriology, Pathology and Biochemistry by arrangement with the Merchant Venturers' Technical College.

Examination successes in the Department of Preventive Medicine during the year were one Fellowship, two Associateships and three Memberships of the Institute of Medical Laboratory Technology.

DEPARTMENT OF PREVENTIVE MEDICINE

Specimens examined during 1949

A. Public Health Examinations

SWABS, Ear, Nose and Throat

Cultures for Diphtheria	...	...	...	5,697
Cultures for Other Organisms	...	...	...	4,129
Films for Vincents	...	...	...	714
Virulence Tests	...	...	...	4
Penicillin Sensitivity	...	...	...	50
Cultures for Whooping Cough	...	...	...	15

SWABS, Others.

Cultures for Organisms	...	...	...	217
Penicillin Sensitivity	...	...	...	1
Films for Tubercle Bacilli	...	...	...	1
Cultures for Tubercle Bacilli	...	...	...	1

SPUTA.

Films for Tubercle Bacilli	...	...	...	3,809
Cultures for Tubercle Bacilli	...	...	...	12
Concentration Tests for Tubercle Bacilli	...	...	...	215
Biological Tests for Tubercle Bacilli	...	...	...	3
Cultures-aerobic	...	...	...	28
Penicillin Sensitivity	...	...	...	7

FAECES.

Cultures for Dysentery	...	...	...	2,650
Cultures for Salmonella and Enteric	...	...	...	1,883
Films for Tubercle Bacilli	...	...	...	28
Cultures for Tubercle Bacilli	...	...	...	—
Concentration Tests for Tubercle Bacilli	...	...	...	7

URINE.

Cultures for Pathogenic Organisms	...	...	...	197
Biological Tests	—

BLOOD.

Cultures	28
Widal Tests	213

RATS for Plague

	1,632
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WATERS.

Complete bacteriological examination	324
Pathogenic organisms	17
Biological Test	...	...	...	1

MILKS AND DAIRIES.

Biological Tests	...	...	...	1,070
Accredited	...	...	...	728
Tuberculin Tested	...	...	...	576
Other Raw Milks	...	...	...	206
Pasteurised (Schools)	...	...	...	354
Pasteurised (Others)	...	...	...	268
Plant Tests	...	...	...	148
Sterilised or Heat Treated	...	...	...	473
Phosphatase	...	...	...	1,237
Cream Line	...	...	...	354
Ice Cream	...	...	...	283
Iced Lollies	...	...	...	29
Bottle Rinses	...	...	...	96
Churn Rinses	...	...	...	21
Candy Floss Crystals	...	...	...	3

FOODSTUFFS AND KITCHEN HYGIENE.

Gram films	...	...	...	20
Films for parasites	...	...	...	247
Films for Tubercle Bacilli	...	...	...	11
Cultures—aerobic	...	...	...	116
Cultures—anaerobic	...	...	...	35
Cultures for pathogenic organisms	...	...	...	59
Biological Tests	...	...	...	4
Animal Tissues for Histology (Blocks)	...	...	...	108
Restaurant Specimens	...	...	...	1,994
Culture for Tubercle Bacilli	...	...	...	1

MISCELLANEOUS.

Hairs for Ringworm	...	...	...	38
Pond water for aerobic culture	...	...	...	1

B. Non-Public Health Examinations.*VENEREAL DISEASES.*

Blood for Wassermann Reaction	9,017
Blood for Kahn Reaction	...	...	...	8,928
Complement Fixation Test for Gonorrhœa	...	...	...	640
Blood for Quantitative Reaction	...	...	...	1,416
Cerebro-spinal fluids for Wassermann Reaction	...	...	...	511
Cerebro-spinal fluids for Cells	...	...	...	269
Cerebro-spinal fluids for Globulin	...	...	...	225
Cerebro-spinal fluids for Protein	...	...	...	86
Cerebro-spinal fluids for Chlorides	...	...	...	27
Cerebro-spinal fluids for Lange	...	...	...	363
Films for Gonococci	...	...	...	6,217
Cultures for Gonococci	...	...	...	5,687
Urine for Gonococci	...	...	...	30
Fluid for Spirochaetes	...	...	...	—
Blood for Flocculation Test	...	...	...	2

C. Other Examinations (Bristol Clinics, Doctors and Hospital Bacteriology)*SWABS.*

Gram films	...	...	...	...	776
Cultures—aerobic	...	...	...	...	605
Cultures—anaerobic	...	...	...	...	214
Penicillin sensitivity	...	...	...	...	68
Films for Tubercle Bacilli	...	...	...	...	55
Cultures for Tubercle Bacilli	...	...	...	...	9
Whooping Cough	...	...	...	...	1

SPUTA.

Gram films	...	...	...	...	22
Films for Tubercle Bacilli	...	...	...	...	800
Cultures for Tubercle Bacilli	...	...	...	...	26
Concentration Tests for Tubercle Bacilli	...	...	...	...	30
Biological Tests for Tubercle Bacilli	...	...	...	...	7
Cultures—aerobic	...	...	...	...	654
Penicillin sensitivity	...	...	...	...	55
Malignant cells	...	...	...	...	75
Fungi	...	...	...	...	15
Cysts and hooklets	...	...	...	...	4
Fat	...	...	...	...	2
Hydatid	...	...	...	...	1

FAECES.

Pathogenic Organisms	...	...	...	...	127
Microscopy	...	...	...	...	15
Dysentery	...	...	...	...	35
Salmonella and Enteric	...	...	...	...	16
Amoebic dysentery	...	...	...	...	35
Schistosoma ova and parasites	...	...	...	...	84
Protozoa	...	...	...	...	230
Tape Worm	...	...	...	...	5
Films for Tubercle Bacilli	...	...	...	...	34
Concentration tests for Tubercle Bacilli	...	...	...	...	13
Occult Blood	...	...	...	...	107
Fats	...	...	...	...	42
Bile Pigments	...	...	...	...	4

URINE.

Routine	...	...	...	...	...	816
Culture	...	...	...	...	...	486
Friedman	...	...	...	...	...	582
Friedman Quantitative	...	...	...	...	...	37
Films for Tubercle Bacilli	...	...	...	...	...	149
Cultures for Tubercle Bacilli	...	...	...	...	...	45
Concentration Tests for Tubercle Bacilli	...	...	...	...	...	18
Biological Tests for Tubercle Bacilli	...	...	...	...	...	56
Bile Salts	...	...	...	...	...	13
Bilirubin	...	...	...	...	...	12
Urobilin	...	...	...	...	...	10
Urea	...	...	...	...	...	7
Urea Concentration	...	...	...	...	...	5
Osazone	...	...	...	...	...	32
Lactose	...	...	...	...	...	3
Glucose	...	...	...	...	...	1
Bilharzia	...	...	...	...	...	1
Diastatic Index	...	...	...	...	...	2
Alkaptonuria	...	...	...	...	...	1
Schistosoma Ova	...	...	...	...	...	2
Ova	...	...	...	...	...	1
Van Slyk Clearance	...	...	...	...	...	5
Fat	...	...	...	...	...	1

BLOOD.

Blood Counts	...	...	...	...	...	888
Differential counts	...	...	...	...	...	260
Haemoglobin counts	...	...	...	...	...	677
Reticulocyte counts	...	...	...	...	...	6
Platelet counts	...	...	...	...	...	544
Bone marrow smear	...	...	...	...	...	1
Mean Cell Diameter	...	...	...	...	...	2
Mean Corpuscular Haemoglobin	...	...	...	...	...	1
Mean Corpuscular Haemoglobin Concentration	...	...	...	...	...	6
Mean Corpuscular Volume	...	...	...	...	...	6
Volume Index	...	...	...	...	...	1
Packed Cell Volume	...	...	...	...	...	8
Bleeding Time	...	...	...	...	...	7
Coagulation Time	...	...	...	...	...	7
Sedimentation Rate	...	...	...	...	...	32
Culture—aerobic	...	...	...	...	...	82
Culture—anaerobic	...	...	...	...	...	1
Culture for Tubercle Bacilli	...	...	...	...	...	1
Fragility	...	...	...	...	...	3
Van den Burgh	...	...	...	...	...	7
Cholesterol—total	...	...	...	...	...	2
Cholesterol—esters	...	...	...	...	...	2
Cholesterol—free	...	...	...	...	...	1
Bilirubin	...	...	...	...	...	6
Van Slyk Clearance	...	...	...	...	...	2
Urea	...	...	...	...	...	52
Sugar	...	...	...	...	...	27
Sugar Tolerance	...	...	...	...	...	18
Penicillin	...	...	...	...	...	1
Paul Bunnell	...	...	...	...	...	68
Films for Malaria	...	...	...	...	...	14
Calcium	...	...	...	...	...	1
Potassium	...	...	...	...	...	2
Chlorides	...	...	...	...	...	2
Uric Acid	...	...	...	...	...	1
Phosphatase	...	...	...	...	...	10
Protein	...	...	...	...	...	9
Total Protein	...	...	...	...	...	4
Total Albumen	...	...	...	...	...	4
Total Globulin	...	...	...	...	...	1
Plasma Protein	...	...	...	...	...	1
Diatase	...	...	...	...	...	1
Thymol Turbidity	...	...	...	...	...	3

Widals	...	...	...	...	23
Lead	...	...	...	...	1
Spirochaetes	...	...	...	...	49
<i>PUS AND OTHER FLUIDS.</i>					
Gram films	...	...	...	...	547
Films for Tubercle Bacilli	...	...	...	...	350
Cultures for Tubercle Bacilli	...	...	...	...	36
Concentration tests for Tubercle Bacilli	...	...	...	...	39
Cultures—aerobic	...	...	...	...	783
Cultures—anaerobic	...	...	...	...	398
Biological tests for Tubercle Bacilli	...	...	...	...	48
Penicillin sensitivity	...	...	...	...	93
Carcinoma cells	...	...	...	...	36
Fungi	...	...	...	...	4
Soluble haemolysin	...	...	...	...	1
Bile Pigments	...	...	...	...	1
Starch	...	...	...	...	1
<i>SEMENS.</i>					
Counts	...	...	...	...	123
Differential counts	...	...	...	...	113
Films	...	...	...	...	36
Cultures for Tubercle Bacilli	...	...	...	...	1
pH.	...	...	...	...	1
<i>CEREBRO-SPINAL FLUIDS.</i>					
Cells—total	...	...	...	...	111
Cells—differential	...	...	...	...	66
Globulin	...	...	...	...	113
Chlorides	...	...	...	...	97
Total Proteins	...	...	...	...	117
Sugar	...	...	...	...	72
Films for Tubercle Bacilli	...	...	...	...	107
Cultures for Tubercle Bacilli	...	...	...	...	128
Biological tests for Tubercle Bacilli	...	...	...	...	26
Gram films	...	...	...	...	97
Culture—aerobic	...	...	...	...	154
Culture—anaerobic	...	...	...	...	5
<i>TEST MEALS.</i>					
Free acids	...	...	...	...	8
Total acids	...	...	...	...	5
<i>HISTOLOGY.</i>					
Human and animal tissues (blocks)	...	...	...	...	751
<i>TISSUES.</i>					
Tissues for Gram films	...	...	...	...	16
Films for Tubercle Bacilli	...	...	...	...	4
Culture—aerobic	...	...	...	...	18
Culture—anaerobic	...	...	...	...	8
Penicillin sensitivity	...	...	...	...	7
Streptomycin sensitivity	...	...	...	...	1
Fungi	...	...	...	...	1
Tetanus	...	...	...	...	6
Biological Test	...	...	...	...	1
<i>OTHER CLINICAL INVESTIGATIONS.</i>					
Vaccines	...	...	...	...	5
Tuberculin solution	...	...	...	...	2
Parasites for identification	...	...	...	...	14
Pump for examination of blood	...	...	...	...	1
Cultures for identification	...	...	...	...	32
Breast Milk	...	...	...	...	1
Museum specimens for mounting	...	...	...	...	3

VI.

APPENDICES

1. PREVENTIVE MEDICINE DEPARTMENT.
2. PUBLIC HEALTH DEPARTMENT.
3. HEALTH COMMITTEE, 1949.
4. SCHOOL HEALTH.

PREVENTIVE MEDICINE DEPARTMENT
STAFF (1949)

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S. W. HINDS, M.D., M.R.C.P., M.R.C.S., D.T.M.&H.,
 Lecturer in Social and Preventive Medicine.

Preventive Medicine Laboratories

K. E. COOPER, B.Sc., Ph.D., M.R.C.S., L.R.C.P., A.R.I.C.,
 Reader in Bacteriology and Director of Laboratory.

DOROTHY WOODMAN, M.Sc., M.D., B.S., M.R.C.S., L.R.C.P.,
 Lecturer in Clinical Pathology and Senior Pathological Officer.

F. J. W. LEWIS, M.B., Ch.B.,
 Lecturer in Clinical Pathology and Pathologist to Southmead Hospital.

PATRICIA M. SIMPSON, M.B., Ch.B.,
 Assistant Lecturer in Clinical Pathology.

S. T. CROWTHER, M.R.C.S., L.R.C.P., D.P.H.,
 Lecturer in Bacteriology.

ANNA MAYR-HARTING, M.D., Ph.D.,
 Lecturer in Bacteriology and Bacteriologist.

D. B. PEACOCK, M.B., Ch.B.,
 Assistant Bacteriologist.

A. H. LINTON, M.Sc.,
 Recognised Teacher and Assistant Bacteriologist.

PATRICIA WELLS, B.Sc.,
 Recognised Teacher and Assistant Bacteriologist.

PUBLIC HEALTH STAFF

Medical Officer of Health: (City, Port and Schools):

R. H. Parry, M.D., B.S. (Lond.), F.R.C.P., D.P.H., K.P.H.

Deputy Medical Officer of Health:

R. C. Wofinden, M.D., B.S., D.P.H., D.P.A.

Principal Assistants:*Matron, External Nursing Services:*

Miss L. M. Bendall.

Residential Nurseries:

A. Alison Craig, M.D. (Lond.), D.P.H., D.C.H.

Bacteriology:

K. E. Cooper, B.Sc., Ph.D., M.R.C.S., L.R.C.P., A.I.C.

Medical Records Officer:

R. G. Emblem.

Personal Assistant to Medical Officer of Health:

D. M. Evans, B.A.

Senior Assistant:

Greta Hartley, M.D., M.M.

Chief Assistant Medical Officer of Health:

James Hutton, M.D., D.P.H.

Senior Assistant:

R. J. Irving Bell, M.R.C.S., L.R.C.P., D.P.H.

Chief Sanitary Inspector:

F. J. Redstone, F.R.San.I., F.S.I.A.

Port Health:

D. T. Richards, M.R.C.S., L.R.C.P., D.P.H.

Maternity and Child Welfare:

A. I. Ross, M.D., D.P.H.

School Medical Service:

A. L. Smallwood, M.B., Ch.B., D.C.H., D.P.H.

Chief Administrative Assistant:

J. G. Watson.

Public Analyst:

E. G. Whittle, B.Sc., F.R.I.C.

Nutritionist:

Miss C. M. Wood, M.A.

CONSTITUTION OF THE HEALTH COMMITTEE, 1949

Chairman: A. J. M. Wright, M.B., B.S. (Lond.), F.R.C.S.

Vice-Chairman: Councillor G. A. Watson Allan.

Aldermen: T. Jefferis
Mrs. C. M. Keel

Councillors: A. J. Allen
Mrs. A. M. Chamberlain
G. P. C. Ford
W. T. P. Hasell
Mrs. M. A. Hennessy
Mrs. A. E. Nutt
P. W. Salmond
Miss H. Strimer
K. E. Stringer
Rev. Mervyn Stockwood
Mrs. K. I. Wilby
W. A. Wilkins.
Town Clerk: Alexander Pickard

SCHOOL HEALTH

SCHOOL MEDICAL OFFICER

R. H. PARRY, M.D.

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BRISTOL EDUCATION COMMITTEE

Chairman - Alderman F. C. WILLIAMS M.A.
Vice-Chairman - Councillor E. M. YEOMAN

School Health Service Sub-Committee

Chairman - Councillor Mrs. F. M. BROWN

Chief Education Officer

G. H. SYLVESTER, M.A.

School Medical Officer and Medical Officer of Health

R. H. PARRY, M.D., B.S. (London), F.R.C.P., D.P.H.

Chief Assistant School Medical Officer

A. L. SMALLWOOD, M.B., Ch.B., D.C.H., D.P.H.

CITY AND COUNTY of BRISTOL

Population (estimated December, 1949)	439,740
Schools :—	
Number of School Departments	190
Average Number on Registers	54,107
Average Attendance	48,302

SCHOOL CLINICS.

<i>Name of Clinic</i>	<i>Address</i>	<i>Clinics Held</i>
Central Health Clinic,	Tower Hill Bristol 2. Tel. 26602	Minor Ailment Inspection and Treatment. Dental Inspection and Treatment. Ophthalmic, Orthopaedic, Aural and Dermatological Consultant Clinics. Chiropody Clinic, Artificial Sunlight Clinic.
Bedminster Health Centre.	Wedmore Vale, Bristol 3. Tel. 63798	Minor Ailment Inspection and Treatment. Dental Inspection and Treatment. Ophthalmic and Aural Consultant Clinics.
Speedwell Health Centre.	Whitefield Road, Speedwell, Bristol 5. Tel. 73194	Minor Ailment Inspection and Treatment. Dental Inspection and Treatment. Ophthalmic and Aural Consultant Clinics.
Portway Health Centre.	Shirehampton, Bristol. Tel. Avonmouth 90	Minor Ailment Inspection and Treatment. Dental Inspection and Treatment. Ophthalmic and Aural Consultant Clinics.
Southmead Health Centre.	Monks Park Ave., Southmead, Bristol. Tel. 66414	Minor Ailment Inspection and Treatment. Dental Inspection and Treatment. Ophthalmic and Aural Consultant Clinics.
Brislington Clinic.	Water Lane, Brislington, Tel. 78720	Minor Ailment Inspection and Treatment.
Broadfield Road Clinic.	Broadfield Road, Bristol 4. Tel. 76292	Minor Ailment Inspection and Treatment.
Child Guidance Clinic.	7, Brunswick Sq. Bristol 2. Tel. 26181	
Speech Clinics.	1, Argyle Road, St. Paul's Bristol 2. Tel. 26760	
and	Broadfield Road Clinic.	

CITY AND COUNTY OF BRISTOL

EDUCATION COMMITTEE

Report of the School Medical Officer for the year ended
31st December, 1949

INTRODUCTION

I have pleasure in presenting the report on the work of the School Health Service in Bristol during 1949, the forty-second report of the series.

The general standard of health and well being of the school children of the City has been well maintained during the year. The table of general condition of the pupils inspected at periodic medical inspections shows that the nutritional standard continues at a good level and there is no doubt that the service of school meals and milk has contributed largely to this good result.

The year has seen the first full year's working of the National Health Service. So far as the school health service is concerned the work has, through the ready co-operation of the South Western Regional Hospital Board, been carried on much the same as before. Negotiations have been going on between representatives of the Authority and the Hospital Board regarding consultant services for school children in the Authority's clinics, and arrangements were concluded early in 1950 which will enable these services to be continued. In the case of the ophthalmic and ear nose and throat services, direct engagements have been made by the Authority whereby the services of the consultant ophthalmic surgeon are available for one session per week, and those of the ear nose and throat surgeons for two sessions per week.

Mr. W. H. B. Stride, the Senior Dental Surgeon, in his report (page 14) states that the dental staff has remained at its pre-war strength throughout the year. Between the end of the year and the publication of this report, however, resignations have been received from three of the dental staff. This Authority, therefore, in common with most other Authorities throughout the country, is faced with the problem of endeavouring to maintain with an inadequate staff the school dental service and the dental service for mothers and young children, as it has been found impossible to obtain replacements of full-time dentists. Endeavours are being made to engage some part-time dental assistance so as to maintain as full a service as possible.

Dr. A. L. Smallwood, the Chief Assistant School Medical Officer, contributes an interesting report on educationally sub-normal children in Bristol (page 25).

At the beginning of the year the residential open air school was transferred to new premises at Periton Mead on the outskirts of Minhead, Somerset. This house has been acquired by the Authority and when certain

structural alterations have been made will accommodate thirty-seven pupils. During the year also it was found possible to increase the accommodation at Russell Town Day Special School for Educationally Sub-Normal Senior Boys by forty to one hundred and forty pupils.

The close co-ordination which exists between the School Health Service and the Public Health Service of the City has been continued. The administrative offices of the Public Health Department have now been moved to premises adjacent to the Central Health Clinic so that an even closer co-operation will be possible in future.

I should like once again to express my thanks and appreciation to Mr. Sylvester, the Chief Education Officer, and his staff, and also to the teachers of Bristol for their ready assistance and co-operation in all matters relating to the health of the children.

R. H. PARRY,
School Medical Officer.

STAFF

The following staff changes took place during the year :—

Medical.

Dr. F. C. Osgood resigned his appointment as Assistant Medical Officer of Health and School Medical Officer on 14th February 1949. He was replaced by Dr. D. M. Jones, M.B., Ch.B., D.P.H., who was appointed on 1st August 1949. Dr. Jones resigned his appointment on 31st October 1949.

Dr. Jean Fraser, M.B., Ch.B., D.P.H., was appointed part-time Assistant Medical Officer on 5th September 1949 on the opening of Broadfield Road Minor Ailment Clinic.

Consultants.

Mr. A. L. Eyre-Brook, M.S., F.R.C.S., relinquished his appointment as part-time Orthopaedic Consultant on 25th November 1949.

Dr. R. P. Warin, M.D., M.R.C.P., and Dr. C. D. Evans, B.A., M.B., B.Ch., took up duty as part-time Consultant Dermatologists on the commencement of the Skin Clinic in November 1949.

Dental Surgeons.

There were no changes in the staff of the dental surgeons during the year.

Child Guidance.

Miss E. A. Hepburn, M.A., Ed.B., was appointed as Assistant Educational Psychologist from 1st February 1949, to fill the vacancy caused by the resignation of Mrs. A. Singer on 30th November 1948.

Arrangements were made for Dr. W. L. Walker, Assistant Medical Officer, to give three sessions per week at the Child Guidance Clinic from 1st April, 1949.

Miss P. J. Piercy resigned her appointment as Psychiatric Social Worker on 31st August, 1949, and was succeeded by Miss M. R. Hall who was appointed on 26th September, 1949.

Speech Therapists.

Miss V. J. K. Coleman, L.C.S.T., was appointed as full-time Speech Therapist from 23rd May, 1949.

Miss W. E. Cooke, M.S.S.T., resigned her full-time appointment as Speech Therapist on 31st October 1949, but continued as part-time Speech Therapist giving four sessions per week.

MEDICAL INSPECTION

A complete medical inspection was made during the year of 17,436 children attending the Committee's primary and secondary schools. The tables relating to these examinations will be found in the statistical section at the end of this report.

Co-operation of Parents.

The number of parents present at primary and secondary school medical inspections was as follows :—

	<i>No. Examined</i>	<i>Parents Present</i>	<i>Per cent.</i>
Entrants	7,921	6,827	86.2
Second Age Group	4,110	2,830	68.8
Third Age Group	4,129	1,191	28.8
Total ..	16,160	10,848	67.1

NURSES' INSPECTIONS AND UNCLEANLINESS

The number of visits to schools made by the nursing staff during the year for the purpose of examining children at survey visits and cleanliness inspections was 2,708 compared with 3,080 in 1948, 118,448 examinations (including 1,272 re-examinations) having been made. The number of individual children found with verminous conditions during the year was 3,659. The treatment and cleansing of children found to have varying degrees of verminous conditions or infestation was continued in all the clinics during the year, 1,167 individual children being treated and 6,380 attendances being made. Treatment by means of a D.D.T. Emulsion was used throughout the year. Most of the cases found were not severe but there is still the problem of the comparatively small number of families where the children have constantly to receive attention and who probably form the main source of the infestation.

The close co-operation between the nurses and the Heads of schools was maintained during the year and the valuable assistance given by teachers and the staff of the Child Welfare Department in dealing with this problem is greatly appreciated.

Home Visiting.

During the year the number of visits for the purpose of "following up" defects, etc., was 2,271. Other visits in regard to uncleanness, etc., totalled 1,460.

TREATMENT

The total number of attendances at the clinics during the year was 268,828.

Skin Clinics.

Scalp Ringworm.

67 Cases of scalp ringworm were dealt with during the year 37 by X-Ray—30 by other means.

The cases treated by X-Rays in 1949 and the two preceding years are as follows :—

	1947	1948	1949
Primary and Secondary Schools ..	5	9	36
Nursery Schools	6	4	1
Total ..	11	13	37

X-Ray Treatment of Ringworm.

"Dr. R. P. Warin, Consultant Dermatologist, Bristol Royal Hospital, reports :—

"It seems likely that there has been a slight progressive increase in the number of cases of ringworm of the scalp during the year. The percentage of animal ringworm of the scalp is in the region of 10% of the cases and does not appear to be increasing. Local treatment for scalp ringworm is still very unsatisfactory. It requires careful supervision and the few cases that are cleared usually take longer than the cases that are epilated by X-rays. Preliminary local treatment for a few weeks often delays the child's return to school and is only justified in a small number of patients when, for example, a kerion action is present and in some cases when a small very patch is involved. Clinically it is impossible to differentiate the animal small pore ringworm from the human small pore and a culture takes some 2-3 weeks. It is said that the animal small pore ringworm reacts more readily to local therapy but it is considered that it is not justified to wait for a culture report in all cases before proceeding to epilation.

There is at present very little delay in getting the epilation carried out. All ringworm cases are now treated at the special ringworm clinic run by both the Radiotherapy and the Dermatological Departments at the Bristol General Hospital. There is no delay at present in making appointments to attend this clinic.

Body Ringworm.

During 1949 181 cases of this disease amongst school children were treated at the school clinics. This compares with 222 cases in 1948.

Impetigo.

The school clinics treated 544 cases of impetigo during the year.

Scabies.

The following table shows the number of scabies cases treated in 1949 and the three preceding years.

Year	School Cases	Cases under school age	Adults	
			Women	Men
1946	1,312	460	1,103	747
1947	789	305	621	420
1948	462	148	292	191
1949	224	100	133	94

The decline in the incidence of cases of scabies since the war continued in 1949 and the numbers are now down to pre-war levels, 224 school children being dealt with during the year compared with 462 in 1949. As in previous years treatment with benzyl benzoate solution and sulphur cream was given and routine disinfestation of the patient's personal clothing and bedding has been carried out as before."

Eye Clinics.

Mr. R. R. Garden, M.B., Ch.B., D.P.H., D.O.M.S., Consultant Ophthalmic Surgeon, reports as follows :—

"In 1949 the total number of refraction cases completed at the clinics was 4,493. This included 4,411 from Primary and secondary departments, 48 from nursery schools and 34 from special schools. In 700 of the new cases spectacles were not required, but in some of these, future visits for observation were arranged.

The number of sessions devoted to refraction work during the year was 488 ; spectacles were prescribed in 1,625 cases and actually supplied to 1,039 children by the end of the year. There has been some improvement in the supply of glasses to urgent cases, although on the whole the delay in the dispensing of prescriptions is still too great.

During 1949 the number of attendances at clinics for treatment of external eye diseases was 6,249.

A total of 224 new squint cases, and 745 observation cases from previous sessions attended during the year. The Maternity and Child Welfare Department referred 89 of the new patients and nursery schools sent 22 as a result of medical inspections.

The Orthoptic Clinic at the Eye Hospital was more satisfactorily staffed in the period under review and the following are the figures :—

Total number of cases examined for the first time 137

Total number of attendances during the year .. 1,277

In regard to the surgical correction of squint, 73 operations for this condition were performed at Bristol Eye Hospital on Bristol school children and in most of these cases additional orthoptic work was carried out."

Defects of Nose and Throat.

The number of children found suffering from the above ailments was 2,551 of whom 424 (including 7 nursery school children) received non-operative treatment at the Committee's clinics. Operative treatment for enlarged tonsils and adenoids at the various Bristol hospitals was given in 1,121 cases.

Aural Clinics.

Mr. G. R. Scarff, M.B., Ch.B., F.R.C.S., Consultant Ear, Nose and Throat surgeon reports :—

"During the year the number of children suffering from aural defects attending the Clinic was 386 (including 38 pre-school cases and 15 nursery school cases). Of these 159 were suffering from middle ear suppuration, i.e. cases which failed to clear up with a few weeks' routine treatment, out of a total of 377 new cases found at school medical inspection. Only 34 of these cases were still attending at the end of the year.

There were 1,974 children including 204 nursery school children and 157 infants from the maternity and child welfare department referred for diagnosis of nose and throat conditions. Of these, 801 were advised operative treatment for infected tonsils and adenoids and 134 advised operative treatment for other ear, nose and throat conditions.

The Health Act has brought its difficulties and calls for increased liaison between the school health service and the family doctor. These difficulties are not insurmountable, and whatever the outcome I consider that non-operative treatment of the children at the clinics, as carried out at present, should go on. The record in the past is such as to show that it must be superior to non-skilled treatment carried out at home by the child's relatives."

Child Guidance Clinic.

Dr. R. F. Barbour, M.A., F.R.C.P., D.P.M., the Director, reports as follows :—

"**Staff.** Dr. Lumsden Walker, a whole time Assistant School Medical Officer, has been working at the Clinic as a trainee assistant from 1st April, 1949 for 3 sessions per week. Miss Priscilla Piercy, Social Worker, resigned in July and Miss Marion Hall, a Psychiatric Social Worker, was appointed in her place.

During the year 402 cases were registered. Since the Clinic opened 4,816 cases have been registered.

Details of the work of the Clinic during the year are as follows :—

<i>Psychiatric.</i>	Diagnostic Interviews	..	..	..	..	377
	Physical Exams.	..	..	..	..	377
	Treatment Interviews	..	..	..	..	923
	Parent Interviews	..	..	..	..	28
	Other Interviews	..	..	..	..	15
	Lectures .. ..	..	..	..	..	13
<i>Psychological.</i>	Examinations (including Juvenile Court cases)	..	..	..	..	335
	Treatment Interviews	..	..	..	..	632
	Parent Interviews	..	..	..	..	24
	Other Interviews	..	..	..	..	13
	School Visits	..	..	..	..	31
	Home Visits	..	..	..	..	3
<i>Social.</i>	Lectures .. ..	..	..	..	..	4
	Treatment Interviews	..	..	..	..	51
	Parent Interviews	..	..	..	..	1,303
	Other Interviews	..	..	..	..	18
	Home Visits	..	..	..	..	72
	Other Visits	..	..	..	..	8
	Lectures .. ..	..	..	..	..	6

Analysis of Sources of Referral of 399 Cases, examined during 1949.

School Medical Department	122
Head Teachers	62
Education Department	17
Juvenile Court	88
Parents	46
General Practitioners	16
Hospitals	20
Children's Department	14
Other Agencies	14

In retrospect, 1949 was not a particularly outstanding year, possibly the most important problem being the adjustment in the division of work consequent on the chronic shortage of psychiatric social workers. Before the war one could count on twice as much social work time as psychiatric or psychological time. This allowed the psychiatric social workers often to act as the first filter at the Clinic, which meant that every parent could be seen once, or if advisable twice, and that in all cases where treatment was undertaken the interview with the parent could last as long as that of the child. Visits to the homes and attendance at meetings of other social agencies could easily be arranged. Child guidance is very frequently parent-guidance and this has to be kept to the fore, as the following cases will show.

Case A. This is a child with multiple problems of backwardness, difficulties in muscular co-ordination and emotional immaturity. He is the younger of two children, the older child being at boarding school. The boy was found to be very dependent, full of fears, unable to go to school alone, constantly ill with vomiting attacks, unable to make friends.

The father of this family had a number of outside interests in the educational and political sphere. He was on many committees and frequently away from home at week-ends. The mother was rather frail, inhibited and with almost no contacts outside the home. She had similar symptoms to the child, namely sick, giddy turns, many fears and a feeling of frustration and inferiority. We found that she depended on the child for companionship and had him to sleep with her when the father was away because of her fear of being alone. The religious upbringing in this family made their handling of aggression difficult as very little outlet was possible.

In this case the mother's problems were not severe enough to make her a patient in her own right, but their effect upon the child was obvious. At the weekly interviews with the psychiatric social worker the mother's difficulties were discussed. The connection between her "attacks" and father's absences were pointed out and brought to a conscious level. She was encouraged to make more outside contacts and to take up one evening activity playing games. The result has been a more real handling of the child's problems and a relieving of his anxieties.

Case B. This child of five years was referred for making scenes each morning about going to school. Mother was taking her to school, but at the school door the child would cry, scream and cling to mother, etc. Once separated from mother and in school, she worked happily. She is the youngest of the family, a much-treasured only child of a second marriage. From two months old she has been given constant attention, crying if left alone. At night one of the family had to go to bed with her.

The mother was seen alone by the psychiatric social worker and the child's behaviour explained as attention-getting. Suggestions were made for giving the child more opportunity for aggressive play. Another child was encouraged to call for her. The mother was reassured that the child was physically fit and that no harm could be done by firm handling at bedtime.

By these means the child's drive for power was diverted into more constructive play and the mother's anxiety allayed. Mother was able to pass on her reassurance to the father and the child was given plenty of praise and affection for achievements and independence and so gradually dropped the old aggressive means of claiming attention.

Possibly the question that the psychiatrist is asked most frequently is—What do you really do? To the superficial onlooker it is either so mysterious or so obvious. As in any relationship between people, the fact that things happen may be obvious, but when one tries to express feelings or emotions by words and other symbols it can be very misleading. When a child comes to the Clinic and is taken on for treatment the child himself has to recognise some purpose in coming to the Clinic, some aim, otherwise it may well seem to him a waste of time. One accepts any problem that the child cares to mention even though it may be very different from that put forward by the mother. The fact that "Sister is a nuisance" may be acceptable to the child as a reason for coming to the Clinic even although the mother is primarily concerned with his stealing. "I don't like school," again, is perfectly adequate. Some children arrive with a fair insight into the causes for their visit. A few parents will use the Clinic as a threat, and one has known of cases where the boy obviously expected to be left behind.

The problem having been stated, one goes on to form a friendship, usually by encouraging the child to do what he likes,—playing with toys, drawing on the blackboard, painting, mixing the sand with the water. Rules are few, deliberate destruction is not permitted, and one expects the child to leave the room as he would like to find it. Encouragement is given to self-expression and every effort made to help the child to do what he wants. All the time one is observing what he does and how he does it; what he says, and all the little gestures which may be so revealing of what the child is feeling at the actual time. Inability to play, or set scenes in which nothing really happens, repetition of a theme, preoccupation with disaster, play with animals rather than with people, unusual use of toys, and many other things are being noted. Some children will leave the therapist out of their play, other children bring him in either as a good parent or as a bad parent. One looks to see whether the child identifies himself with a special person or toy, for instance a red motor car. Not only the selection of material, but the use of it and the interpretation put on it, are all made use of in treatment. The basic therapeutic factor is, however, the relationship between the child and the grown-up. The play, work to the child, is carried out in an atmosphere of friendly co-operation and help. One is aiming at the emotional self-expression of the child; he tries out, as it were, his feelings and discovers what the world will tolerate. One tries to make it the ideal parent relationship. A single session may be revealing, but it is the pattern of development that one is mostly looking at. Success at school, the illness of a member of the family, will colour the child's thought and influence his play. Possibly towards the end of a particular session one may remark to the child "Do you ever feel like that at home?" and a reply such as "How did you know?" paves the way for an even closer understanding between the child and the therapist. Eventually the problem may be able to be discussed quite openly, and the play loses its stereotyped qualities—the child is freer, more at ease, able to take and give emotionally and to get on more easily with his companions."

Enuresis Clinic.

Dr. W. L. Walker, M.B., Ch.B., D.P.H., reports: —

"As mentioned by Dr. Barbour in the Annual Report for the Child Guidance Clinic for 1948 a special clinic had then been started with the co-operation of Dr. Smallwood for children suffering from enuresis. This

clinic was continued during the early part of the year at the Child Guidance Clinic and individual and group play therapy was used for the children while, at the same time, the mothers were interviewed singly and also were given group talks on the subject. During the summer of 1949, owing to difficulties of space and staffing at the Child Guidance Clinic, this work was reorganised and was transferred to the Central Health Clinic.

The procedure now is that both mother and child are seen for an initial interview; the mother is interviewed in the absence of the child and full family history, with particular reference to the social, physical and educational progress of the child, is taken. The child's health, the health of siblings, and important events in the child's life, for example, birth of siblings, evacuation, parental difficulties, parental absences, hospitalisation, etc., are particularly noted. The child is then given a full physical examination and, where there seems to be any emotional difficulty, the child is interviewed alone and a history taken from it. Subsequent upon this, there follow monthly treatment interviews and, if the child progresses favourably, follow-up interviews at three-monthly intervals are then considered sufficient.

Particular points considered are general health, housing, particular problems in relation to home or school, training or lack of training and the presence of any inherent emotional instability. Mental retardation must always be diagnosed as this makes treatment more difficult. The condition, though not physically serious, may be serious psychologically in as much as interference in domestic routine, the enormous amount of laundry, and the difficulties regarding holidays and camps, etc., produces acute despair in both parent and child.

The treatment we have used here includes regulation of any urinary abnormality, attention to physical defects establishment of a regular bedtime routine suitable to the child's age, "lifting" at 10 p.m. and perhaps at other times during the night (aided, in older children, by the use of an alarm clock), and the use of drugs, stimulative or sedative. Restriction of fluids, raising of beds and such other physical measures have been tried but, in common with other observers, have been found useless.

Of all the drugs we use, Benzedrine is the most helpful. In cases where there is no serious emotional problem, where the child sleeps heavily or where the child when wakened at 10 o'clock cannot be properly roused, and where the general health is good, Benzedrine in doses generally of 20 mgms or over, given in divided doses at bedtime and at 10 p.m. has been of great value.

The most important factor in treatment is continuous encouragement of both parent and child and the replacement of fatalistic despair by hope for cure. This is greatly assisted by the conversations between parents while waiting, which brings home to them the realisation that their child is not the only one to suffer from this symptom, and indeed that the condition is not by any means uncommon.

I append below the results of the clinic from its commencement until the end of the year. That we are only touching this enormous problem is seen by the present waiting list of 76 cases which is added to at a rate of 12 a month.

Up to the end of the year 75 cases have been treated or are under treatment. Of these, 39 have ceased to attend the clinic. Of these 39 :

5 are better (i.e. symptom free).

3 are markedly improved and discharged.

11 ceased attending (two were considerably improved and nine I.S.Q.)

7 came only to one appointment.

- 5 came to less than three appointments, so no conclusion can be reached.
- 4 had cured themselves before receiving an appointment from the waiting list.
- 3 refused appointments and
- 1 presented a problem sufficiently serious for her to be transferred to the Child Guidance Clinic.

Of the 36 cases at present under treatment :

- 7 are better and are merely to be followed up.
- 8 are considerably improved.
- 9 are unimproved after more than four appointments but are still attending.
- 10 have had three appointments or less and a similar proportion of these may be expected to improve.
- 2 have been discharged as untreatable and of these one is an unstable defective and the other a 3-year old badly trained.

It will be seen that of the current cases we have 15 who are better or markedly improved out of 36, and only 9 who, after prolonged treatment, remain as before. Of the filed cases, 10 were better or improved and, if we exclude the 7 who only came to one appointment and the 7 who did not come at all, we have improved again 10 out of 24, i.e. just 40%. It would appear, therefore, that the experiment of starting a special enuretic clinic has been justified."

REFERENCES :—

Thursfield, J. A., *Lancet*, 1923, II, 528.

McGuiness, *Med. Clin. N. America*, 1935, 19, 287.

Treatment is discussed in "The Nervous Child"—Cameron, (London) 1945.

Treatment is summarised in Kanner, *Text Book of Child Psychiatry*, 2nd. edition, 1948 (U.S.A.) p. 428. et seq.

Dental Clinics.

Mr. W. H. B. Stride, L.D.S., Senior Dental Officer, reports as follows :—

"The dental staff has remained at 10 during the year, and at the present time this is a matter that merits very careful consideration in that the staff has continued to carry on this priority work in spite of the vastly superior financial attraction of other forms of practice.

The number of children inspected during the year has increased to 44,486 compared with 41,940 in 1948, and the number treated has fallen a little to 25,534 compared with 25,851. In addition, 1,338 Nursery School children have been inspected and 333 received treatment.

The school population has now risen to 54,107, and, in view of the fact that no additions can be made to the staff, it must be realised that it is no longer possible to inspect and treat this number of children at regular yearly intervals. The interval between inspections at present is about 14 months and it seems likely that this interval will get gradually longer. This is disappointing as parents are very anxious to obtain early treatment for their children and some of the senior children show considerable ingenuity in seeking methods of examining their own teeth minutely and coming up to point out suspected cavities.

Particulars of cases and attendances of mothers and young children at the dental clinics during the year are as follows :—

			Mothers		Pre-School Children
			Ante-natal	Post-natal	
New cases	..	..	1,340	77	1,882
Attendances	..	..	3,294	235	3,658

The arrangements commenced in October, 1947, whereby a number of Bristol school children are inspected and treated by the Department of Children's Dentistry of the Bristol Dental Hospital were continued during the year. The figures relating to the children dealt with in 1949 are as follows :—

UNIVERSITY OF BRISTOL						
<i>Department of Children's Dentistry, Bristol Dental Hospital.</i>						1949.
Number of cases inspected	..	..	..	..	..	589
Number needing treatment	..	..	..	..	..	467
Number of new cases treated	..	..	..	..	..	228
Others treated	..	..	..	..	..	237
Total attendances	..	..	..	..	..	465

Orthodontic Clinic.

Since the 5th July, 1948, the treatment of all orthodontic cases has been undertaken by the Bristol Dental Hospital. A full-time Orthodontist has been appointed by the Hospital and attends a diagnostic session at the Central Health Clinic each week. Cases needing fixed or removeable appliances are referred to the Dental Hospital for treatment. This diagnostic session is proving of the greatest value as in so many cases it is necessary that they should be dealt with at an early stage when the tendency to abnormality is first noted. This session is well attended and cases can be seen very quickly for diagnosis."

Orthodontic Diagnostic Clinic.

Details of the cases seen at the Diagnostic Clinic are as follows :—

New patients	..	..	..	..	..	631
Attendances	..	..	..	..	..	837
Referred to Dental Hospital	..	..	..	..	..	427
Completed	..	..	..	..	..	92

Mr. Trevor Johnson, L.D.S., reports :—

"At the end of the year there were 627 cases under treatment at the Dental Hospital and a high standard of treatment is being maintained. Altogether 402 new cases were seen during the year.

The new arrangements continue to operate satisfactorily and the waiting time for cases to be seen has been considerably reduced."

Orthopaedic and Postural Defects.

Mr. A. L. Eyre-Brook relinquished his appointment as part-time Orthopaedic Consultant on 25th November, 1949, having accepted a full-time engagement with the United Bristol Hospitals and the South Western Regional Hospital Board. The Orthopaedic Clinic, has, however, continued to function at the Central Health Clinic under Mr. Pridie and Mr. Jones. The services of the Authority's physiotherapists continued to be available for massage, remedial exercises, sunlight treatment, etc. throughout the year.

The number of children seen at this Clinic shows little change from 1948 though rather more children under 5 years of age were seen. The following table shows the defects of school children seen at this Clinic during the year :—

					Age 5 yrs. and over	Age under five yrs.
Paralysis (a) Flaccid	..	..	..	..	47	14
(b) Spastic	..	..	..	..	52	17
Tuberculosis of Bones and Joints	..	..	..	..	18	—
Congenital abnormalities of Bones and Joints	..	..	..	..	37	22
Amputations	..	..	..	..	14	2
Rickets	..	..	..	..	1	4
Genu Valgum	..	..	..	..	62	68
Various (flat foot, spinal curvature etc.)	..	..	..	..	851	215
Total					1,082	342

Chiropody Clinic.

Mr. L. Tasker, M.Ch.S., the Committee's Chiropodist reports :—

"For the first time since the opening of the Clinic in 1942 there was a decrease in the number of attendances—the figures being 3,290 treatments (786 new cases) against 4,206 (882 new cases) in 1948.

Of the new cases 630 were from Primary Schools, 140 from Secondary Modern and Grammar Schools and 16 from the M. & C.W. Department.

Plantar Warts again figure largely with 512 new cases—141 less than 1948. Other groups remain about the same as other years. During the year some 25 cases were referred to the Orthopaedic Department for operation or physio-therapy."

The following is a summary of treatments :—

	<i>Primary Schools</i>		<i>Secondary and Grammar Schools</i>	
	<i>1st</i>	<i>Other</i>	<i>1st</i>	<i>Other</i>
Metatarsalgia	4	12	1	3
Hammer Toes	17	34	6	4
Plantar Warts	423	1,883	89	385
Pes Cavus	3	4	1	1
Foot Strains	23	43	4	7
Hallux Valgus and Rigidus	9	17	5	2
Miscellaneous	151	90	34	35
Total	630	2,083	140	437

Cardio-Rheumatic Clinic.

Professor C. Bruce Perry, M.D., Ch.B., F.R.C.P. reports :—

"During the year the work of the Clinic has continued as previously. The figures show that there has been a decrease in the number of cases of acute rheumatism seen in the active stage and needing institutional treatment. This decrease continues the general fall in the incidence of the disease which has been taking place for the last 15 years but which was interrupted by a slight rise last year. The large number of cases referred to the Clinic found to have no organic heart disease (111 new cases) may be surprising. The majority of these cases are, however, children who come with heart murmurs found on routine examination but who are found to have normal hearts. It is clearly of great importance that these murmurs should be recognised as of no significance and that the child should not be labelled as having heart disease. This part of the work of the Clinic is, perhaps, actually its most valuable function, since it enables the parents and the child to be reassured and ensures that the child suffers no unnecessary restriction. It may be asked why these cases are seen again as 357 were last year. This re-examination is made for two reasons. First to make sure that the original assessment was correct and secondly to avoid the mistake that sometimes happens that a new doctor sees the child and is told that the child has been referred to the Cardiac Clinic and assumes that there must be some heart disease. Re-examination once a year or so avoids these risks."

Summary of cases attending **CARDIO-RHEUMATIC CLINIC, 1949**, including Primary, Secondary, Grammar and Nursery Schools

	No treatment or restriction	No treatment but restriction of games, etc.	Treatment and school	Treatment and exclude from school	Institutional treatment	TOTAL
NEW CASES.						
Rheumatic Heart Disease	9	—	—	..	10	19
Chorea	—	—	1	1	4	6
No Organic Disease	111	—	—	—	—	111
Congenital Heart Disease	9	—	—	—	—	9
Various	11	—	—	1	8	20
	140	—	1	2	22	165
RE-EXAMINATIONS.						
Rheumatic Heart Disease	353	56	3	8	8	428
Chorea	46	—	3	2	2	53
No Organic Disease	357	—	—	—	—	357
Congenital Heart Disease	79	14	1	1	4	99
Various	75	1	—	5	5	86
	910	71	7	16	19	1,023

No. of Individual children examined .. 605
 No. of New cases for 1949 .. 165
 No. of Re-examinations .. 1,023
 TOTAL NUMBER OF ATTENDANCES .. 1,188

Asthma Clinic.

Dr. R. Irving-Bell, M.R.C.S., L.R.C.P., D.P.H. reports :—

“There was nothing outstanding to report in the assessment and treatment of children and adolescents referred to the Asthma Clinic.

It is often found that these children are under care and treatment from a number of sources and it seems desirable that there should be close co-operation between these various agencies to avoid overlapping.

The question of the treatment of children suffering from asthma is under constant review. Favourable results continue to be shown with the treatment of hay fever cases by the anti-histamine drugs—these drugs are, on the whole, disappointing with some kinds of asthma, though where sensitivity to certain proteins is the cause, results are more encouraging. So often, too, attacks of asthma are initiated by over-exertion or an emotional upset at home or at school—then treatment is mainly preventive.”

Chest Clinic.

Dr. C. J. Campbell Faill, F.R.C.P.(E.) who is in charge of this clinic reports as follows :—

“The number of children of school age examined at the Tuberculosis Clinic remains about constant. During the year 905 school patients were examined, of whom 463 were new and 442 old. Of the 905, 31 were diagnosed as definite pulmonary tuberculosis, 9 non-pulmonary tuberculosis, and 865 as non-tubercular.

It has been noted that there appears to be an increasing number of non-reactors to tuberculin in each age group. At the same time, there has been no reduction in the number of acute young adult cases found between the ages of 15 and 25. It, therefore, would appear that the application of B.C.G. vaccination to non-reactors of school age, may play a very important part in the future prevention of tuberculosis.”

Mass Radiography.

Dr. E. E. Mawson, M.D., Ch.B., reports :—

“The arrangements for the mass radiography of children due to leave school were continued during the year and 3,644 children were X-Rayed. The details of the cases are given below.”

<i>Summary</i>	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Miniature Films	1,941	1,703	3,644
Recalled for large films	93	94	187
Normal large films	53	56	109
Did not attend	1	1	2
Significant cases	39	37	76

Analysis of Significant Cases.

Of the significant cases, 32 were found on clinical examination to have non-tuberculous conditions as set out below :—

	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Abnormality bony thorax ..	3	3	6
Bronchitis and Emphysema ..	1	—	1
Bronchiectasis	10	—	10
Pleural thickening	2	3	5
Congenital Cardiac Lesion ..	1	—	1
Acquired Cardiac Lesion ..	2	4	6
Dextrocardia	1	—	1
Pneumonia	—	1	1
Basal Fibrosis	—	1	1
Total ..	20	12	32

The remaining 44 cases were found to have varying degrees of tuberculous conditions and were dealt with as follows :—

			Disposal							
			Boys	Girls	Total	N.A.	Dr.	Disp.	San.	
Active										
Active Primary										
Lesions with symptoms	..		—	—	—	—	—	—	—	
Without symptoms	..		—	—	—	—	—	—	—	
Post-primary unilateral										
With symptoms	..		1	7	8	—	—	5	3	
Without symptoms	..		—	—	—	—	—	—	—	
Post-primary bilateral										
With symptoms	..		1	4	5	—	—	2	3	
Without symptoms	..		—	—	—	—	—	—	—	
Tuberculous pleural effusion										
			—	1	1	—	—	1	—	
Inactive										
Inactive Primary lesion	..		10	8	18	11	—	7	—	
Inactive Post-primary lesion	..		7	5	12	5	1	6	—	
Total			..	19	25	44	16	1	21	6

Artificial Sunlight Clinic.

During 1949, 246 children of school age and 57 children at nursery schools were given a complete course of artificial sunlight treatment. Details of the cases are given below :—

<i>Defect</i>	<i>Prim. Secy. and Gram. Schools</i>			<i>Nursery Schools</i>		
	<i>No. Treated</i>	<i>Im-proved</i>	<i>Station-ary</i>	<i>No. Treated</i>	<i>Im-proved</i>	<i>Station-ary</i>
General Debility	118	93	25	23	13	5
Bronchitis-mod.	23	19	4	3	2	1
Bronchitis-slight	5	3	2	1	1	—
Enlarged glands	11	9	2	—	—	—
Malnutrition	4	1	3	7	6	1
Miscellaneous	85	71	14	23	17	6
Total	246	196	50	57	44	13

Speech Clinics.

Northern Ared.

Miss W. Cooke, M.S.S.T. reports :—

“ Miss D. Wilson resigned her appointment in October, 1948, and was not replaced until the appointment of Miss V. J. K. Coleman L.C.S.T. at the beginning of June. During that time, therefore, it was impossible to deal adequately with the large number of children requiring treatment. Several cases were discharged or suspended earlier than would otherwise be the case in order that those on the waiting list might be given the chance of treatment.

A speech recording apparatus has been installed at the Argyle Road Speech Clinic and this should prove a valuable aid to the periodical assessment of the progress of cases. It will also be possible gradually to build up a record library for demonstration purposes.

In view of recent research upon the subject of dyslalia it is suggested that all children suffering from this type of speech defect, also those with lispings of the Welsh “ double l ” or lateral type which is often residual to the dyslalic condition should be given audiometer tests prior to attendance at the Speech Clinic.

As mentioned in a previous report, it is considered advisable that Heads of Schools should bring to the notice of School Medical Officers any cases of continuous dysphonia, i.e. hoarse voice. Teachers should be asked to avoid allowing children to sing or read aloud in a forced or unnaturally high voice."

Statistics for the year are as follows :—

(a)	Children already in attendance at 1st January, 1949	..	58
(b)	New cases admitted during the year	.. ..	48
(c)	Total number of cases in attendance during the year	..	106
(d)	Transferred to Miss Coleman (Southern Area)	..	47
(e)	Discharged during 1949	.. ..	26
(f)	The types of new cases dealt with were as follows:		
	(i) Stammering	.. ..	19
	(ii) Speech Defects	.. ..	29
			<hr/> 48

(g) The defects of the cases in attendance during the year were as follows :—

Stammering	.. ..	37
Dyslalia (lalling)	.. ..	37
Idioglossia	.. ..	7
Sigmatism (lisping)	.. ..	13
Dysarthria	.. ..	5
Cleft Palate	.. ..	6
Partial Deafness	.. ..	1
		<hr/> 106

Miss Cooke resigned her appointment as full time Speech Therapist on 31st October, 1949, but continued to give four sessions per week to this work to the end of the year.

Southern Area.

Miss V. J. K. Coleman, L.C.S.T. reports :—

"The outstanding feature in the work of the Speech Clinic, Southern Area, is the very great degree of co-operation which has been extended on all sides. I have found the staffs of schools especially helpful in their willingness to discuss their pupils under treatment and to co-operate wherever possible. As a direct result of this co-operation, there has been a marked improvement in several cases of stammering.

The good clinic conditions are also a valuable contributing factor to treatment in many cases.

Statistics :

(a)	Number in attendance June, 1949	.. ..	65
(b)	Total number of attendances	.. ..	1,189
(c)	New cases during year	.. ..	54
(d)	Cases discharged	.. ..	36
(e)	Number of cases in attendance at end of year	.. ..	83
(f)	Types of case :		
	Stammering	.. ..	23
	Stammering and Speech Defect	.. ..	2
	General dyslalia	.. ..	35
	Idioglossia	.. ..	4
	Macroglossia	.. ..	1
	Deafness	.. ..	1
	Aphasia	.. ..	2
	Dysphonia	.. ..	4
	Cleft Palate	.. ..	9
	Dysarthria	.. ..	2
			<hr/> 83
(g)	School visits	.. ..	23
(h)	Home visits	.. ..	15
(i)	Parents interviews	.. ..	135

There have been many visitors to the Clinics, including post-graduates, student Queen's Nurses, Health Visitors and student teachers.

By kind invitation of Dr. Grey Walter of the Burden Neurological Institute, some experimental work has been commenced to ascertain the possible value of electro encephalogram in the diagnosis of certain types of speech disorder. The amount of this type of work is necessarily limited for lack of suitable material. In a few cases, however, interesting results have been obtained.

The long waiting list for plastic surgery is a serious drawback to work with cleft palate patients, several of whom are developing behaviour problems as a result of their speech inadequacy."

The following cases under treatment in the clinics may be of interest :—

Malcolm, aged 5 was referred to the clinic in June with unintelligible speech, following no pattern. By October his speech had improved so as to be intelligible, following a normal pattern. His night terrors and enuresis had ceased. One month later his nail biting had ceased, and his speech continued to improve steadily.

Brian, aged 9 first attended in June with unintelligible speech being unable to read. By October he had acquired good speech, was able to read simple books with ease, which improvement was accompanied by considerable increase in self confidence.

Kenneth, aged 6 attended in June with unintelligible speech. He now has no sound difficulties and has changed from a painfully shy little boy into an independent little fellow and a good mixer.

Joan, aged 11 suffered a relapse of her 'stammer' conditioned by the difficulties of her second year at Grammar School. Two months' treatment showed a marked improvement in speech and an ability to deal with her school difficulties. The Headmistress reported a return to her previous co-operation and interest in school.

P. L., aged 13 had attended a good Secondary Modern School for a year without uttering a word there. Nor could she read. A home visit revealed an ability for adequate speech. Since September she has asked for anything she needs at school and will speak if it is essential. With strangers she will hold and enjoy long conversations. Her general bearing and self-confidence have improved beyond measure and her mother reports that now, when playing with her brothers, she is the leader, and the teacher when playing schools. Her reading ability is improving slowly but steadily.

Dr. R. J. Irving-Bell, M.R.C.S., L.R.C.P., D.P.H. reports :—

"The arrangements described in the Report for 1948 by which a weekly session is held at the Central Clinic for the examination of children with speech defects so as to eliminate any possible physical cause was continued throughout the year. This Clinic enables those cases requiring E.N.T. or other specialist treatment to be referred to the appropriate consultant for treatment before speech therapy is undertaken.

A few children under school age were referred to the Clinic but in these cases it is usual to allow the child to have a period of a few months at school after which a further examination is held and speech therapy, if then found advisable, is recommended."

SPECIAL SCHOOLS

Schools for Educationally Sub-normal Children.

Dr. R. J. Irving-Bell, M.R.C.S., L.R.C.P., D.P.H., reports :—

Day Special Schools.

"The accommodation at Russell Town Special School for Senior Boys was increased by 40 places to 140 in March, 1949. This increase in accommodation has enabled the waiting list for this school to be reduced to reasonable proportions. The greatest pressure is now at the school for Junior Mixed Children at Newfoundland Road where the waiting list at the end of the year was some 50 cases. It is hoped, however, to make arrangements in the new year for two classes for educationally sub-normal children to be opened at the new Novers Hill Primary School when this school is completed.

Residential Special Schools.

The additional washing and sanitary facilities at Kingsdon Manor Residential Special School were completed in September, 1949, and this has enabled the accommodation to be increased to 40 places. There is still however a considerable demand for residential places for senior educationally sub-normal boys and even with this increase in accommodation there is still a fairly heavy waiting list.

The demand for places in the Residential School for Senior Girls at Croydon Hall is not so marked, and it has been possible to offer one or two vacancies to neighbouring Authorities."

The number of children on the registers of the day and residential special schools at the end of the year is as follows :—

	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Russell Town Day Special School, Bristol	142	—	142
Rose Green Day Special School, Bristol	—	105	105
Newfoundland Road Day Special School, Bristol	56	26	82
Croydon Hall Residential School, Watchet (including 11 from other authorities)	—	37	37
Kingsdon Manor Residential School, Kingsdon (including 1 from another authority)	39	—	39

OPEN AIR SCHOOLS

Dr. B. J. Boulton, M.B., Ch.B., the Medical Officer of the Open Air Schools reports :—

New Place Residential Open Air School, Porlock.

"This school had to be closed in July as the lease of the premises had expired. A property, Periton Mead, near Minehead had been purchased by the Authority but unfortunately difficulties were encountered with the water supply to the house and it was not possible to re-open the school there by the end of the year. Some of the children who had been attending New Place were accommodated in the Authority's day open air school at Novers Hill, 10 boys and 6 girls from New Place being in attendance there at the end of the year."

Periton Mead Residential Open Air School.

"This is the new Residential School and takes the place of New Place Residential School, Porlock, which closed down at the expiration of the lease in September, 1949.

Periton Mead is a charming house on the slope of the hill behind Minehead, just off the Porlock Road, and about a mile from Minehead station. Around the house are large kitchen and ornamental gardens with several flat lawns suitable for open air classes.

Unfortunately owing to work and alterations at Periton Mead in connection with the water supply, the school did not open to receive pupils until January of 1950 and those children who had not completed their stay at the Residential School were temporarily transferred to the South Bristol day open air school.

The present accommodation at Periton Mead is for twenty pupils. With alterations inside the house, mainly in connection with the provision of extra sanitary equipment, the number of pupils will be increased to 37, which is the recognised accommodation of the school.

Eventually it is hoped to accommodate 60 children but to do this some extra building outside the house will be necessary.

Owing to the present limited accommodation and because no new pupils were admitted between July 1949 and January 1950, the waiting list is longer than it has been for several years.

The average period of stay at the school is two terms, or approximately six months."

South Bristol Day Open Air School, Novers Hill.

Delicate Children.

" This Department of the school has been full during the last 12 months, and despite a discharge rate of approximately 20% at the end of each term, there is a long waiting list.

At present, there are more than the usual number of cases of asthma and bronchiectasis at the school. It is our experience that such children seldom benefit materially from a period of attendance at the school of less than twelve months and they are often retained for a longer period in the hope that they may improve further. The matter becomes somewhat of a problem when application is received for their re-admission within six months of their return to ordinary school. This not infrequently happens and is one reason for the length of the waiting list.

Physically Handicapped Children.

In last year's report, a marked falling off in the applications for the admission of physically handicapped children was recorded. This is no longer the case. At present there is a short waiting list for admission to this side of the school. During the year, the home teaching programme has been continued and extended and a number of severely handicapped children have received tuition in their homes from the visiting teachers."

The number of children on the registers at the end of the year is as follows :—

	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Debilitated children	31	29	60
Physically-defective children	19	17	36

Home and Hospital Teacher Service.

Mr. L. Bone, the Head of South Bristol Day Open Air School reports :—

" During the year 1949 the work of providing some form of education commenced last year for severely handicapped children unable to attend school, was continued and expanded. After Easter in that year a second teacher was appointed by the Education Committee to help with the work on three days per week and from then on it was possible for each teacher to spend one half-day per week at both the Children's and the Southmead Hospitals where children of school age who were long-term patients were able to receive some instruction in school subjects. Two children in the

Bristol Royal Infirmary were also visited weekly over a period of several months. The addition of the second teacher also made it possible to divide the children into Senior and Junior groups and this facilitated the work of both teachers.

At the 31st December, 1949 the number of children being visited for instruction in their homes was 19 and an additional 8 were being visited in the hospitals. During the year 20 children were added to the "Home" list while 22 were removed for various reasons, viz : return to school—16 ; on reaching the age of 16 years—4 ; for other reasons—2.

With the help of a second teacher on three days per week it was found possible, not only to include the half-day visits to the hospitals as mentioned above, but also to increase the number of visits made to each home-bound child each week. In many cases three visits per week were made possible. During the year under review approximately 1,064 individual visits were made to the homes and 136 half-day visits to the hospitals.

The enthusiasm shown by the visiting teachers in this work has been accompanied in most cases by the hearty co-operation of the parents, in many cases at some sacrifice of their own time and comfort for in some homes it is not a simple matter to place a room at the disposal of the visiting teacher.

Finally, I have to record with gratitude some valuable assistance of a voluntary nature given by a retired headmaster to several boy and girl patients from Secondary Grammar Schools."

Schools for Deaf and Partially-sighted Children.

The numbers of children on the registers at the end of the year at the day schools for Deaf and Partially-sighted Children are as follows :—

	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Partially-deaf children	5	1	6
Deaf children (including 2 children from other authorities)	21	27	48
Partially-sighted children	17	10	27

In addition, the following handicapped children were being maintained in various special schools on 31st December, 1949.

Epileptic Children.

	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Lingfield Epileptic Colony, Surrey	2	—	2
St. Elizabeth's R.C. School, Much Hadham, Herts.	1	—	1

Educationally Sub-normal Children.

	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Allerton Priory R. C. Residential Special School, Liverpool	—	2	2
Besford Court R.C. Residential School Worcestershire	13	—	13
Monyhull Residential School, Warwickshire	1	—	1
St. Christopher's School, Bristol—			
Day pupils	2	2	4
Residential pupils	1	—	1
Sandhill Park Residential School, Dawlish	1	1	2

Blind and Partially sighted Children.

	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Chorleywood College for the Blind, Herts	—	1	1
Royal School for the Blind, Westbury, Bristol			
Day pupils	3	1	4
Residential pupils	6	2	8
West of England Institute for Partially-sighted Children, Exeter	3	2	5

Deaf Children.	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Royal School for Deaf Children, Birmingham	—	1	1
St. John's Institute for Deaf Children, Boston Spa	1	1	2
West of England School for Deaf Children Exeter	—	1	1
Maladjusted Children.			
Bourne House Hostel, Lincolnshire	—	1	1
Halcon House Hostel, Taunton	—	2	2
Hill Orchard Residential School, Warwickshire	2	—	2
Ledston Hall Residential School, Leeds	—	1	1
Mulberry Bush Residential School, Standlake, Oxon	—	1	1
Delicate Children.			
St. Patrick's Open Air School, Hayling Island	—	1	1
Physically Handicapped Children.			
Burton House School, Malmesbury	—	2	2
Hinwick Hall School, Wellingborough	1	—	1
St. Rose's R. C. School, Stroud	—	1	1
Victoria Home, Bournemouth	1	—	1

MENTALLY RETARDED CHILDREN

Dr. A. L. Smallwood, contributes the following report :—

"The first provision made in Bristol for the special education of mentally defective children, i.e. children who were mentally retarded but educable and who are now referred to as educationally subnormal children, was in 1897 when two classes were opened at the Barton Hill School (accommodation 27) and Bedminster Bridge School (accommodation 20). Dr. L. M. Griffiths, a general practitioner, was appointed as medical officer to these classes. An additional class was opened in 1898 at Blackfriars Mixed School and further classes were opened in 1899 at Mina Road and Victoria Park Schools.

In 1901 the first special school for these children was opened at Zion Chapel, Bedminster, the school later being transferred on 2nd March, 1903, to Orchard Place School, Bedminster Bridge which provided accommodation for 60 children. In 1902 a special school was also opened at Redcross Street to accommodate children from the northern and eastern areas of the city and the special classes at various schools were closed. This school also had a department for physically handicapped children. Children were referred, in the first place, by head teachers or medical officers of schools. They were then examined by Dr. Griffiths to decide whether they were suitable cases for admission. All children on leaving the special schools were referred to a voluntary after-care committee consisting of members of the Education Committee, medical representatives, school teachers and other persons. Members of this Committee paid visits to the homes to advise parents on the care and supervision of these children and endeavours were made to find suitable work for them.

Children attending the special schools were examined twice yearly by Dr. Griffiths. It is interesting to note that in 1909 he reported that the condition of the children at Redcross Street School was better than those at Orchard Place because at Redcross Street there was a bath and facilities for the regular bathing of the children.

From 1914 onwards a mid-day meal was provided on the school premises. In 1917 and again in the following year, Dr. Griffiths drew the attention of the Committee to the need for a reduction in the size of the classes at the special schools, which then averaged 32 pupils, stating that the numbers were too high for the children to receive full benefit from the education provided. He also drew attention to the necessity of having children referred for examination at an earlier age and urged the setting up of special classes for dull and backward children in the ordinary schools.

The first mention of children being placed at residential special schools was in 1920 when 4 children were placed at Besford Court Residential Special School for R.C. children.

On the death of Dr. Griffiths, in 1924, the medical arrangements for the children at these schools were re-organised and arrangements were made for the examinations to be carried out by the full-time medical officers of the Authority. The numbers at the two schools gradually became smaller during the following years and at the end of 1938 there were 119 on the registers at Redcross Street and 46 at Orchard Place. This latter school was closed in August, 1939 and the children were transferred to the Redcross Street School which in 1941 was moved to new premises at Barleyfields School, St. Philip's. In 1942 some of the children were evacuated from the city to a temporary residential school for 40 educationally subnormal girls and junior boys which was opened at Eastcourt House, Malmesbury. The day special school was transferred from Barleyfields to Carlton Park School in August, 1943. A further temporary residential school was opened in March, 1944 at the Cedars, Purton, Wiltshire with accommodation for 17 boys.

In January, 1946 a re-organisation of the special school arrangements in the city was undertaken. The day special school for boys and girls at Carlton Park School became a school for senior boys with accommodation for 100 and was re-named Russell Town Special School. New special schools were opened for senior girls at Rose Green (accommodation 100) and for junior e.s.n. children at Newfoundland Road (accommodation 80).

In May, 1947 the residential school at Eastcourt House was transferred to new premises at Croydon Hall, near Washford, Somerset and this became a special school for senior girls only, with accommodation for 40. The residential school for senior boys was also transferred in April 1948, from Purton to Kingsdon Manor, near Ilchester and this school now has accommodation for 40 boys. In addition, the accommodation at the Russell Town day special school was increased during 1949 from 100 to 140 places. This increase in accommodation, however, though of great assistance in helping to relieve the pressure of the waiting lists, was not, in itself, sufficient to cope with the group of children who need special educational treatment as e.s.n. children. During the year, the question of future provision for these children was given careful and detailed consideration by the Committee.

It is generally agreed that roughly 10% of the school population need special educational treatment of some kind as e.s.n. pupils but the actual number of children who need special school provision as being e.s.n. in this country has always been a matter of speculation. The Ministry of Education's figure given in their booklet on special educational treatment is 1.2% of the school population though in fact, most investigations have tended to show that this figure was an underestimate of the probable total. The figure of 1.2% however, has been defended as representing the number of e.s.n. children for whom it is practicable at the present time to make provision.

An investigation was carried out in 1949 by two senior medical officers and three educational psychologists, on the Authority's staff, to try to estimate more nearly the need in Bristol. At first, four secondary modern schools were selected as being representative of a cross-section of the city. Later on, the junior schools feeding two of these were also visited and were surveyed. The procedure was to invite the head teacher to refer children who, in his opinion, might have an intelligence level 25% or more below the average. The natural criticism of this is that it imposes a selective element which will vary from teacher to teacher. The following are the

results based on assessments of the intelligence using the Terman Merrill (1937) scale, individually :—

E.S.N. Survey, 1949.

<i>School</i>		<i>No. on Roll</i>	<i>Total Referred</i>	<i>I.Q. <75</i>	<i>e.s.n. as % -age of refs.</i>	<i>e.s.n. as % -age of school roll</i>
Secondary Modern Girls		519	37	20	5.4	3.9
Secondary Modern Mixed		335	38	12	3.1	3.6
Secondary Modern Boys		459	25	10	4.0	2.2
Secondary Modern Mixed		584	33	10	3.0	1.7
Totals		1,897	133	52	39%	2.7%
Junior Mixed School	1	278	20	1	5	0.4
	2	503	16	6	37.5	1.2
	3	416	26	10	38	2.4
	4	465	23	5	22	1.1
	5	273	8	1	12.5	0.4
	6	371	43	7	16	1.9
Totals		2,306	136	30	22%	1.3%
FINAL TOTAL		4,203	269	82	30.5%	1.95%

It will be seen that of a total of ten schools, with a roll of 4,203 children, 82 (1.95%) were found to be e.s.n., with I.Q's of 75 or below. This number does not include those children who would ordinarily be at these schools but who are now in special schools. One point of interest is that the estimation of backwardness varies considerably from school to school; the percentage of e.s.n. children of those referred varies from 5 to 50% and the I.Q's vary from 49 to 114. It seemed that there were a number of children who were very retarded in school work though potentially of average ability. The percentage of e.s.n. children found in secondary modern schools is double that found in the junior schools. Inadequate ascertainment of the backward child in the past few years contributed to by the war and general dislocation of facilities, has probably resulted in more e.s.n. children arriving at the secondary modern school before being discovered; also a child does tend to fall more and more behind in his educational achievements as he gets older.

The investigation must be considered as agreeing in the main with the larger survey carried out in 1944 by Miss Dunsdon, M.A. (then Educational Psychologist in this city). As the result of her investigation, which was related to 35 schools comprising 45 departments, she came to the conclusion that 2.5% of the school population were e.s.n. within the meaning of the Education Act, 1944; that this percentage varied "between different districts, but in most cases to a less extent than is sometimes assumed;" that there was "a serious degree of educational retardation, beyond the limits inevitably imposed by their mental dullness, not only among those needing special school education, but also among a large group of borderline children who required some modification of curriculum in the ordinary school." She recommended that further special schools should be constructed to cater for these children. This point was considered anew by the Education Authority in 1949 who decided against the construction of

further special schools at the present time. It was felt that, the present provision :—

Junior Mixed : Newfoundland Road	..	..	..	..	..	80 places
Senior Girls (11-16) : Rose Green	..	..	..	..	..	100 places
Senior Boys (11-16) : Russell Town	..	..	..	..	..	140 places
Residential Boys : Kingsdon Manor	..	..	..	..	..	40 places
Residential Girls : Croydon Hall	..	..	..	..	..	40 places

meets the most urgent need for special school accommodation.

The pressure on the accommodation for senior girls could probably be relieved in the future by an increase of 50% in the number of places but this was not thought to be an urgent matter. For senior boys, the accommodation has recently been increased from 100 to 140 but there is constant pressure on the residential school for the admission of boys who in various ways have become anti-social. Probably an increase to 60 places would meet this immediate need but a four-class unit of 80 places would be better to allow proper classification according to age and ability.

The girls' residential school at Croydon Hall, 40 places, satisfies this Authority's needs and takes a few pupils from other Authorities. The principal pressure, however, is on the junior accommodation at the Newfoundland Road school of 80 places. There have been long waiting lists for this school since its inception and it is to be expected that an increasing number of children will be ascertained as to their need for special educational treatment between the ages of 8 and 11 years. It is commonly recognised that ascertainment after the age of 11 years makes it impracticable to secure the proper benefit from special educational treatment. The Local Education Authority, therefore, came to the conclusion that more places should be provided in special classes in the junior schools to be constructed, and the first two such classes are due to be opened in 1950. In addition to these special classes to be made available for junior e.s.n. children, the school at Newfoundland Road will continue until it is established that the special classes in the ordinary schools are supplying the need.

Some of the problems relating to special classes have yet to be met and these include the grouping of children into these units from the schools where they have hitherto attended, the proper selection and training of teachers for the classes, the supervision of all the special classes so that the most modern methods may be available to all and that the work may be closely integrated, the wide age and ability ranges which are likely to be found in single classes, and the problem that has yet to be solved, of how best to try out certain children, with or without specific defects, who have been in the past admitted to an observation class at the junior e.s.n. school. To decide when the child ceases to be educable forms a special problem. Hitherto, it has remained a fair maxim that the only way this can be done is to try to educate the child, and the teachers' opinion assumes a correspondingly great importance. There are some who hold that Education Authorities might make themselves responsible for children with lower levels of intelligence than those normally found in e.s.n. schools, that is, by a type of superior occupation centre. This would combine the virtues of an observation unit for borderline cases with the teaching of children by more practical and socialised methods than have been usual in the e.s.n. school or class. One is aware of a number of independent schools springing up in various parts of the country which lay themselves out to cater for such children and, indeed, we have been asked in this city to supervise and make reports for other Authorities on such children of theirs who are attending independent schools in Bristol. There is a strong tendency for the proprietors of such schools to claim that children of low intelligence are teachable when, in fact, they are merely trainable. The Local Mental Health

Authority maintains an occupation centre with 120 children on roll and is, at present, seeking to enlarge its premises to care more for this type of child.

It has been the practice of this Authority, since 1948, to hold a conference of interested persons to consider what advice should be offered to the Local Authority about the need for supervision of e.s.n. children when they are about to leave school. The conference consists of the ascertainment medical officer, the educational psychologists, the head teachers, the supervising officer of the Mental Health Service, the Youth Employment Officer, and, where necessary, a representative of the Children's Officer, with the Chief Assistant School Medical Officer as chairman. This has proved to be most useful in assembling the great amount of information which tends to collect about these difficult children. Some children are referred to the Mental Health Authority for statutory supervision on leaving school and it has been the practice of the Local Health Authority to exercise "voluntary" supervision on others, that is, on those borderline cases which might need help and advice in their early years in industry. The figures of children seen at these Conferences to the end of 1949 show that of 88 children interviewed, 44 (50%) were thought to need statutory supervision and were referred to the care of the Mental Health Service under Section 57(5) of the Education Act, 1944. In 5 cases (5.7%) the names were passed on to the Supervising Officer of the Mental Health Service for visiting on a voluntary basis. In 39 cases (44.3%) no supervision was felt to be necessary. Details of the cases seen are given below:—

	<i>No. Seen</i>	<i>Statutory Supervision</i>	<i>Voluntary Supervision</i>	<i>No. Supervision</i>	
Christmas 1949 Sp. Schs.	22	12 (1 C. & P. Case)	2	8	
Ord. Schs.	9	2	1	6	
Summer 1949 Sp. Schs.	19	10	2	7	(1 C. & P. Case) (1 Probation Case)
Easter 1949 Sp. Schs.	21	10	—	11	
Christmas 1948 Sp. Schs.	17	10	—	7	
	—	—	—	—	
	88	44	5	39	
	—	—	—	—	
% Statutory supervision		50%			
% Voluntary supervision		5.7%			
% No supervision		44.3%			

The Local Education Authority has now realised that a much greater number of e.s.n. children would benefit by advice than those which, in the past, have been dealt with by the Mental Health Authority in the statutory and "voluntary" ways, and they are proposing to institute a system of after-care operated by the Youth Employment Officer for educationally subnormal children leaving special or ordinary schools, other than those referred for statutory supervision by the Mental Health Service, and for a number of children in special schools for other categories of handicapped pupils for whom some after-care is considered desirable. It is felt that, in this way, a young person in industry, who has been retarded at school, is much more likely to accept advice than if the advice came from either the Mental Health Authority or from special persons attached to the school.

The view is often expressed that too much attention is given to and too much provision made for the e.s.n. child. Certainly such children take up an undue amount of the time of the School Health Service. On the one hand it is believed that many of our post-school troubles such as delinquency, problem families or industrial unrest have an intimate relationship with the fact that in the past the e.s.n. child has been largely left to his own devices. On the other hand the e.s.n. child who achieves stability because of firm

guidance and adequate achievement in school and because his home influence is of the desired strength, is likely to be of great value in modern industry. He is able to do one of the many simple repetitive jobs which are so commonly demanded in the factory of today, and to find satisfaction in so doing when a person of greater intelligence would become bored and dissatisfied. He has few needs because ambition has passed him by, and provided he carries out his ordered and daily routine he will always, in these days, discover any number of people to advise him in any situation he may find himself. His difficulty, and a very real one, will be sometimes to decide which advice to take."

NURSERY SCHOOLS AND CLASSES

At the end of the year there were 12 nursery schools maintained by the Education Committee with accommodation for 802 children between the ages of 2 and 5 years. In addition, there were 23 infant's schools with nursery or baby classes accommodating in all 877 children between the ages of 3 and 5 years. All these nursery schools and classes remained full with long waiting lists, the number of children awaiting admission being over 1,000.

Details of medical inspections in Nursery Schools and classes during the year are as follows :—

					<i>Periodic Exams.</i>	<i>Re-exams.</i>
Nursery Schools .. .. .	..	..	..	..	502	1,929
Nursery Classes .. .. .	..	..	..	..	645	1,791
Number of Special Inspections and Re-Inspections					..	871

Classification of Nutrition.

	<i>Number of children inspected.</i>	<i>" A "</i> <i>Good.</i>		<i>" B "</i> <i>Fair.</i>		<i>" C "</i> <i>Poor.</i>	
		<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
Nursery Schools	502	192	38.2	259	51.6	51	10.2
Nursery Classes	645	307	47.6	316	49.0	22	3.4

Treatment of Minor Ailments.

No. of defects treated in clinics and at schools and classes	5,699
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Treatment of Defective Vision and Squint.

Errors of Refraction (including squint)	49
No. of pupils for whom spectacles were prescribed	..	..	..	..	21

Dental Inspection and Treatment.

No. of pupils inspected by the Dentist—Periodic Inspections	..	..	1,275
Special Inspections	..	..	63

TOTAL 1,338

No. found to require treatment	..	..	..	..	516
No. actually treated	..	..	..	..	333
Attendances for treatment	..	..	..	..	427
Extractions of temporary teeth	..	..	..	..	274
Fillings of temporary teeth	..	..	..	..	34
Administrations of general anaesthetics for extractions	..	..	..	..	157
Other operations on temporary teeth	..	..	..	..	473



Work of girls at a Secondary Modern School.

"Landing" practice,
Secondary Modern
School.



Junior children
at work on a
"Bridgett" frame.



Physical re-education
of a
spastic child.



Medical Treatment of the Pre-school child

The following cases of children under school age were treated at the various clinics during the year :—

Eye Diseases	..	..	..	..	..	161
Ear Diseases	..	..	..	..	..	151
Skin Diseases	..	..	..	..	..	403
Minor Ailments	..	..	..	..	..	124
Aural Surgeon's cases	..	..	..	..	..	195
Eye Specialist's cases	..	..	..	..	..	109
Heart Specialist's cases	..	..	..	..	..	8
Orthopaedic Specialist's cases	..	..	..	..	..	319
Chiropody Clinic cases	..	..	..	..	..	16
Various	..	..	..	..	..	717
						<hr/> 2,203 <hr/>

INFECTIOUS DISEASES

Cases of measles among school children during the year numbered 1,315. School cases of scarlet fever totalled 496, whooping cough 106, and there were four cases of cerebro-spinal fever.

The number of cases of diphtheria occurring in children of school age during the year was 3 as compared with 13 in 1948 and no deaths from this disease were reported. Forty-four cases of poliomyelitis occurred amongst children of school age in 1949 with two deaths.

During the year 436 patients of school age were admitted to the Infectious Diseases Hospital at Ham Green, the average stay per patient being 24.7 days.

Immunisation against Diphtheria.

The general arrangements for the immunisation of school children against diphtheria were continued during the year. It is estimated that approximately 72% of Bristol school children have now been immunised.

The complete figures for the year are as follows :—

Number given full course of immunising inoculations	..	..	869
Number given a "booster" injection	..	..	3,773

Diphtheria cases amongst school children, in the last 4 years :

1946	..	..	..	..	..	23
1947	..	..	..	..	..	22
1948	..	..	..	..	..	13
1949	..	..	..	..	..	3

None of these 3 cases had received injections for immunisation against diphtheria.

PHYSICAL EDUCATION

Mr. J. McA. Milne, Chief Organiser of Physical Education, contributes the following report which has been compiled with the assistance of Miss C. E. Cooke, Senior Woman Organiser of Physical Education :—

"On the whole the work in junior and infant schools has continued to improve in spite of the lack, in many cases, of a school hall, and the still inadequate supply of individual mats. In some cases, however, schools are getting over this difficulty by making their own mats or purchasing material out of school funds. Where children have been able to work barefooted, for at least part of the lesson, the standard has shown improvement.

Teachers attending courses have been given the opportunity of discussing with Dr. Smallwood this question of barefoot work, and other problems relating to health training. This has been of great value and much appreciated. Teachers are beginning to recognise their share of responsibility in finding and reporting abnormal movements. In addition to

discussing these problems with teachers, Dr. Smallwood has also spoken to parents on open days when they have been invited to see a class at work, and to appreciate the need for suitable clothing. These meetings have led to lively discussion, and it is hoped the results will be far reaching. The value of this co-operation with the School Health Service cannot be too highly emphasised.

In September a demonstration of movement training was given to a Refresher Course for School Medical Officers at the Red Maids School. This included training and climbing movements for infants and juniors, and was followed by work with senior girls. Miss Meredith Jones demonstrated Educational Dance movements with infants and older girls.

A new Physical Education film in colour was taken in 1949 and the Nursery Section of this was shown to the School Medical Officers.

Miss Meredith Jones has conducted courses in movement for teachers of infants and juniors, many of whom are now trying to teach this form of movement in schools.

The Secondary Modern Schools have again been fortunate in having the services of Miss E. Taylor the A.E.W.H.A. Coach. She visited several playing fields to which all hockey coaches were invited, and gave helpful criticism to the teams who took part in the first Bristol Schools' Hockey Tournament. This was held at the Imperial Ground and was very much enjoyed. Miss Taylor was pleased with the standard of play. Netball and Rounders Tournaments have also been held.

The Play Centres were closed at the end of December, 1949, owing to the need for economy, but several are continuing in a voluntary capacity. Many of those closed have been greatly missed by the children who continue to ask when they can return."

MEALS AND MILK SERVICE

At the end of the year 2,338 children were receiving free dinners and 19,746 on payment; 59 kitchens were supplying meals at this time to 194 canteens in all types of schools.

Facilities for the distribution of dinners during the holidays were made available where necessary but the demand was small compared with term time; 501,870 free dinners were supplied to "necessitous" children during the year as compared with 495,843 in 1948. The number of dinners supplied on payment, excluding those supplied to staff and certain other educational establishments, was 3,714,196 as compared with 3,934,569 in 1948.

From a return taken in October, 1949, 44,515 children were supplied with milk daily.

SCHOOL MEALS SERVICE

During the year every effort has been made to make the school meal as attractive as possible and to encourage the children to eat all types of food. The full quantity of rationed goods provided by the Ministry of Food is used. Additional sugar for preserving is available and is used in season for the bottling of fruit. Fish, cheese, eggs and bacon are used to capacity. Dried milk is used to supplement the ration of liquid milk and in this way it is possible to supply a meal providing 23-25 grammes protein, 28-30 grammes fat and 900-1,000 calories. Every effort is made to vary the menus as much as possible and give a balanced meal. Fresh fruit and vegetables are used wherever possible and no tinned or dried vegetables are included unless there are exceptional circumstances or a real scarcity of fresh goods. Sauces and mayonnaise are now an accepted part of the dinner but it is taking some time to train the children to like them.

Cook Supervisors and Cooks-in-charge have had instructions on how to produce meals giving the necessary body-building, energy-giving and

protective foods and the proper proportions. Evening lectures have also been given by the Deputy Medical Officer of Health and the Deputy Sanitary Inspector to the kitchen staffs on the causes of food poisoning and general hygiene. Endeavours have been made to make the staff realise their individual responsibility with regard to these matters. It is hoped to arrange lectures for part-time staff on food poisoning and hygiene during the coming year.

It has been found possible during the year to close 5 American-type kitchens as 2 kitchens built with the new schools at Embleton Road and Romney Avenue have been opened and in addition 2 further large Ministry of Works kitchens are now in operation.

Mr. F. J. Redstone, F.R.San.I., F.S.I.A., Chief Sanitary Inspector, reports :—

School Milk.

“ In addition to the routine supervision of the dairies at which school milk is processed, 222 samples of the milk were taken on delivery to the schools during the year 1949.

These all proved to be satisfactory and indicate that the close control exercised over the milk supplied to Bristol school children is having effective results. All the milk supplied to schools is, of course, pasteurised.”

Food Supply to School Kitchens.

“ Visits were made to the school kitchens to inspect foodstuffs which were considered to be out of condition or unfit. The necessary advice and instructions were given in each case and all unsatisfactory conditions were immediately reported to the Education Department for attention, advice being given on the best methods to adopt in order to obtain improvements.

During 1949 there were three outbreaks of food poisoning associated with meals taken at school, the largest of these involving approximately 130 people. Extensive enquiries were made and specimens of food and ingredients taken for examination, as well as swabs of kitchen utensils, faeces from children and kitchen staff and also nose swabs from all the latter. The nose swabs from four persons in one kitchen indicated the presence of haemolytic staphylococcus aureus organisms and it is thought this may have been the cause of the type of gastro-enteritis suffered in one outbreak. The other two outbreaks were of a very minor character and no organisms could be traced to account for them.

A great deal of work has been done by the staff of the Health Department to ensure that the closest supervision and control is exercised over all aspects of the supply of foodstuffs to school kitchens, and a vigorous policy is being pursued to instruct kitchen staffs in correct methods in an effort to ensure that a high standard of cleanliness is maintained. A series of lectures to the school kitchen staffs has been given by the Health Department staff and film strips shown illustrating the dangers to health in the unclean handling of foodstuffs and cooking equipment, with practical illustrations of how kitchen work and food preparation should be carried out.”

School Kitchens and Canteens.

“ During the year the Health Department continued with the survey commenced at the end of 1948 regarding washing up methods and 2,000 tests were made involving 77 school kitchens and canteens. Practically 70% of these tests reached the required standard, which shows a steady improvement. It is hoped that the continuation of constant vigilance in these matters by the sanitary inspectors and the lectures and showing of film strips to kitchen staffs of the type mentioned above will result in a higher degree of cleanliness generally. Much has been done in this matter, but a great deal of effort must still be made by all concerned if satisfactory hygienic conditions are to be maintained.

It should be mentioned that the enthusiasm and co-operation shown by the kitchen staffs in these matters is greatly appreciated by the Health Department. An indication of the keenness of the staffs may be gauged by the fact that at three lectures in one month, given outside normal working hours in the evenings, the attendance at each was in the region of 130 people."

EMPLOYMENT OF CHILDREN

The Employment of Children Inspector reports :—

"During the year ending the 31st December, 1949, 435 applications for registration were received in respect of children between the ages of 14 and 15 years. Of these 20 were refused and 415 children were registered to be employed in deliveries etc., in connection with the following trades :—

						<i>Boys</i>	<i>Girls</i>
Bakers	..	..	..	..	..	1	—
Butchers	..	..	..	..	..	15	—
Chemists	..	..	..	..	..	1	—
Dairy	..	..	..	..	..	1	—
Grocers	..	..	..	..	..	17	—
Laundry	..	..	..	..	..	—	1
Library	..	..	..	..	..	—	1
Newsagents	..	..	..	..	..	357	19
Tailors	..	..	..	..	..	2	—
						<hr/> 394	<hr/> 21

One licence was issued, one renewed and one cancelled for street-trading by young persons under the age of 18 years.

During the year there were 663 cases of infringement of the Bye Laws made in pursuance of the Children and Young Persons Act, 1933 (as amended by the Education Act, 1944) :—

By Employers	..	..	..	..	..	..	318
By Parents	..	..	..	..	..	..	317
By Street Traders	..	..	..	..	..	..	15
Prosecutions, Final Notices etc.	..	..	..	..	..	..	13
							<hr/> 663

These were dealt with as follows :—

Warned	..	..	..	..	..	..	650
Final Notices—							
to Employers	..	..	..	..	..	..	9
to Parents	..	..	..	..	..	..	—
Prosecutions taken	..	..	..	..	..	..	4
							<hr/> 663

Public Entertainments.

23 applications for children to take part in public entertainments in accordance with Section 22 of the Children and Young Persons Act, 1933 were received and 7 licences were granted.

43 children took part in public entertainments in local theatres, and were licensed by the following Education Committees :—

Bristol	..	..	..	..	..	..	7
Others	..	..	..	..	..	..	36
							<hr/> 43

Applications refused by Bristol Education Committee 16

The Committee granted permission for 3,994 children to take part in 82 entertainments given for charitable purposes.

Theatres, halls, dressing rooms, lodgings and schools were visited to ascertain that the conditions under which these children were employed were satisfactory."

REFRESHER COURSE FOR SCHOOL MEDICAL OFFICERS

A Refresher Course for School Medical Officers arranged by the School Health Service Group of the Society of Medical Officers of Health was held in Bristol from the 20th–27th September, 1949. Forty-five Medical Officers attended from various parts of the country and they were accommodated at the University of Bristol, Wills' Hall, where most of the meetings were held.

At the inaugural Dinner and Reception the members were welcomed by the Rt. Hon. the Lord Mayor of Bristol, Alderman Percy Walter Cann, J.P., and Professor R. H. Parry, M.D., F.R.C.P., D.P.H., Medical Officer of Health and School Medical Officer for Bristol.

The programme of lectures and meetings included the following :—

“ Chest Conditions in School Children.”

R. R. Belsey, M.B., M.S., F.R.C.S., Thoracic Surgeon, Frenchay Hospital.

“ Congenital and Hereditary Abnormalities,”

J. A. Fraser Roberts, M.A., D.Sc., M.D., F.R.C.P., F.R.S.

Demonstration of Physical Training by Miss Meredith Jones, with pupils of Bristol Schools illustrating “ The Laban School of Movement Training,” arranged by Miss C. E. Cooke, Senior Women Organiser of Physical Education, Bristol.

“ The Future of the Health Service,”

R. H. Parry, M.D., F.R.C.P., D.P.H., Medical Officer of Health and School Medical Officer, Bristol.

“ Rheumatism in Schoolchildren,”

C. Bruce Perry, M.D., F.R.C.P., Professor of Medicine, and Director of the Cardio-Rheumatic Unit, University of Bristol.

“ Diagnostic Play in Projection Tests

R. F. Barbour, M.A., F.R.C.P., D.P.H., Director, Child Guidance Clinic, Bristol.

“ Electro-encephalography and Allied Material,”

F. L. Golla, M.A., M.B., B.Ch., F.R.C.P., Director, Burden Neurological Institute.

“ The Handicapped Child,”

J. Lumsden, M.A., H.M.I. of Special Educational Treatment, Ministry of Education.

“ Public Speaking,”

B. A. Fletcher, M.A., B.Sc., Professor of Education, University of Bristol.

Clinical Demonstration,

A. V. Neale, M.D., F.R.C.P., D.P.H., Professor of Child Health, University of Bristol.

“ Future Trends in Education,”

G. H. Sylvester, M.A., Chief Education Officer, Bristol.

“ Problem Families,”

R. C. Wofinden, M.D., D.P.H., D.P.A., Deputy Medical Officer of Health, Bristol.

“ Health Education,”

W. Wagland, M.R.C.S., L.R.C.P., Lecturer in Health Education, Hampshire County Council.

“ Education of the Educationally-Subnormal Child,”

Miss M. T. McBride, M.A., Ed.B., Senior Psychologist, Bristol, L.E.A.

“ Juvenile Delinquency,”

R. F. Barbour, M.A., F.R.C.P., D.P.H.

Visits to special schools for handicapped children.

Showing of films on health topics.

Discussion on “ Social Paediatrics,” opened by
Professor A. V. Neale.

FOREIGN VISITORS

Under the auspices of the British Council a number of doctors, students and teachers from various European countries and from the Empire visited Bristol during the year. As part of the general arrangements, visits were made to the Authority's clinics and special schools and various aspects of the School Health Service were explained and discussed.

STATISTICAL TABLES

YEAR ENDED 31st DECEMBER, 1949

TABLE I. MEDICAL INSPECTION OF PUPILS ATTENDING MAINTAINED
PRIMARY AND SECONDARY SCHOOLS.

A.—PERIODIC MEDICAL INSPECTIONS.

1948		1949
	1. Number of Inspections in the prescribed Groups :—	
5,862	Entrants	7,921
5,595	Second Age Group	4,110
3,433	Third Age Group	4,129
	TOTAL	16,160
14,890	2. Number of other Periodic Inspections	1,276
1,406		
	GRAND TOTAL	17,436

B.—OTHER INSPECTIONS.

32,166	Number of Special Inspections	..	..	..	..	..	..	31,155
30,416	Number of Re-inspections	..	..	..	..	..	..	30,946
62,582	TOTAL	..	..	..	..	..	..	62,103

C.—PUPILS FOUND TO REQUIRE TREATMENT.

NUMBER OF INDIVIDUAL PUPILS FOUND AT PERIODIC MEDICAL INSPECTION TO REQUIRE TREATMENT
(Excluding Dental Diseases and Infestation with Vermin.)

1948			GROUP.	1949		
<i>For Def. Vision.*</i>	<i>For any other condn.</i>	<i>Total Individ. pupils.</i>		<i>For Def. Vision.*</i>	<i>For any other condn.</i>	<i>Total Individ. pupils.</i>
70	708	770	Entrants	93	922	997
132	451	570	Second age group	138	384	502
141	345	471	Third age group	83	216	290
343	1,504	1,811	Total (prescribed groups)	314	1,522	1,789
35	47	80	Other Periodic Inspections	178	217	389
378	1,551	1,891	GRAND TOTAL	492	1,739	2,178

* Excluding Squint.

TABLE II.

A.—RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION.

1948					1949			
PERIODIC INSPECTIONS.		SPECIAL INSPECTIONS.			PERIODIC INSPECTIONS.		SPECIAL INSPECTIONS.	
No. of Defects.		No. of Defects.			No. of Defects.		No. of Defects.	
Req. treatm't.	Req. obs. but not treatm't.	Req. treatm't.	Req. obs. but not treatm't.		Req. treatm't.	Req. obs. but not treatm't.	Req. treatm't.	Req. obs. but not treatm't.
48	21	3,845	102	Skin	97	11	3,365	67
378	67	574	38	Eyes—(a) Vision ..	492	79	744	110
31	12	27	4	(b) Squint ..	69	18	53	7
16	18	1,074	31	(c) Other ..	39	24	1,039	30
43	19	65	15	Ears—(a) Hearing ..	38	22	66	7
5	4	647	7	(b) Otitis Media ..	21	19	356	3
43	28	1,171	21	(c) Other ..	38	27	855	42
474	387	2,220	297	Nose or Throat ..	565	668	1,593	366
32	43	36	18	Speech	43	49	35	15
20	64	377	34	Cervical Glands ..	60	209	189	66
86	127	135	38	Heart and Circulation	146	145	168	90
126	176	792	144	Lungs	104	181	544	195
				Developmental—				
15	6	7	3	(a) Hernia	8	11	3	2
1	—	3	—	(b) Other	—	8	7	2
				Orthopaedic—				
74	55	18	10	(a) Posture	68	78	24	29
39	12	12	2	(b) Flat Foot ..	38	25	7	10
116	46	110	41	(c) Other	90	76	111	39
				Nervous system—				
—	1	7	—	(a) Epilepsy	5	10	5	3
11	28	57	15	(b) Other	9	56	72	19
				Psychological—				
17	30	21	6	(a) Development ..	18	26	37	15
20	1	25	1	(b) Stability	22	17	26	9
496	168	10,850	1,121	Other	224	215	9,766	860

B.—CLASSIFICATION OF THE GENERAL CONDITION OF PUPILS INSPECTED DURING THE YEAR IN THE AGE GROUPS.

Age Groups.		No. of Pupils Inspected.	A. (Good).		B. (Fair).		C. (Poor).	
			No.	% of col. 2.	No.	% of col. 2.	No.	% of col. 2.
Entrants		7,921	3,386	42.75	4,085	51.57	450	5.68
Second Age Group		4,110	1,622	39.46	2,293	55.79	195	4.75
Third Age Group		4,129	1,776	43.01	2,241	54.28	112	2.71
Other Periodic Inspections ..		1,276	387	30.33	849	66.53	40	3.14
TOTAL		17,436	7,171	41.12	9,468	54.30	797	4.58
1948 TOTAL		16,296	5,781	34.48	9,408	57.73	1,107	6.69

TABLE III. TREATMENT TABLES.

GROUP I.—MINOR AILMENTS (excluding uncleanness).

<i>No. of Defects treated, or under treatment during the year.</i>		<i>No. of Defects treated, or under treatment during the year.</i>
1948		1949
	Skin—	
	Ringworm—Scalp—	
9	(i) X-Ray treatment	37
37	(ii) Other treatment	30
222	Ringworm—Body	181
462	Scabies	204
681	Impetigo	544
2,701	Other skin diseases	2,466
2,207	Eye Disease—(External and other, but excluding errors of refraction, squint and cases admitted to hospital)	2,128
2,411	Ear Defects	1,554
25,857	Miscellaneous—(e.g., minor injuries, bruises, sores, chilblains, etc.)	24,547
34,587	TOTAL	31,691
83,516	Total number of attendances at Authority's minor ailments clinics	268,828

GROUP II.—DEFECTIVE VISION AND SQUINT

(excluding Eye Disease treated as Minor Ailments—Group I.)

<i>No. of defects dealt with</i>		<i>No. of defects dealt with</i>
1948		1949
4,118	Errors of Refraction (including squint)	4,399
13	Other defect or disease of the eyes (excluding those recorded in Group I)	12
4,131	TOTAL	4,411
	No. of Pupils for whom spectacles were—	
1,938	(a) Prescribed	1,599
1,451	(b) Obtained	1,039

GROUP III.—TREATMENT OF DEFECTS OF NOSE AND THROAT

<i>Total Number Treated.</i>		<i>Total Number Treated.</i>
1948		1949
	Received operative treatment—	
1,530	(a) for adenoids and chronic tonsilitis	1,121
191	(b) for other nose and throat conditions	149
503	Received other forms of treatment	417
2,224	TOTAL	1,687

GROUP IV.—ORTHOPAEDIC AND POSTURAL DEFECTS.

1948		1949
147	(a) Number treated as in-patients in hospitals or hospital schools ..	152
339	(b) Number treated otherwise, e.g., in clinics (schools or out-patient departments)	321

GROUP V.—CHILD GUIDANCE TREATMENT AND SPEECH THERAPY

1948	Number of pupils treated—	1949
608	(a) under Child Guidance arrangements	779
155	(b) under Speech Therapy arrangements	133

TABLE IV.—DENTAL INSPECTION AND TREATMENT

1948		1949
	(1) Number of pupils inspected by the Authority's Dental Officers—	
38,850	(a) Periodic age groups	40,034
3,090	(b) Specials	4,452
41,940	(c) TOTAL (Periodic and Specials)	44,486
28,638	(2) Number found to require treatment	28,376
25,851	(3) Number actually treated	25,534
39,169	(4) Attendances made by pupils for treatment	39,956
	(5) Half-days devoted to :—	
324	(a) Inspection	350
3,700	(b) Treatment	*3,610
4,024	TOTAL	3,960
14,549	(6) Fillings : Permanent Teeth	12,917
1,044	Temporary Teeth	758
15,593	TOTAL	13,675
4,285	(7) Extractions : Permanent Teeth	4,579
21,398	Temporary Teeth	23,715
25,683	TOTAL	28,294
13,157	(8) Administration of general anaesthetics for extraction	14,976
	(9) Other Operations :	
7,385	Permanent Teeth	7,390
7,777	Temporary Teeth	10,327
15,162	TOTAL	17,717

* In addition 505 sessions were devoted to the treatment of mothers and young children.

TABLE V. INFESTATION WITH VERMIN

1948		1949
147,853	(i) Total number of examinations in the Schools by the School Nurses or other authorised persons	118,448
3,399	(ii) Total number of individual pupils found to be infested	3,659
164	(iii) Number of individual pupils in respect of whom cleansing notices were issued (Section 54 (2), Education Act, 1944)	206
136	(iv) Number of individual pupils in respect of whom cleansing orders were issued (Section 54 (3), Education Act, 1944)	112

TABLE VI. SUMMARY OF WORK DONE DURING THE YEAR.

1948		1949
	School Medical Officers :—	
795	No. of Visits to Schools for Periodic Inspection	918
16,296	No. of Children Examined at Periodic Inspection in Schools	17,436
2,076	No. of Re-examinations in Schools	2,797
	No. of Special Inspections	1,092
	Dental Surgeons :—	
38,850	No. of Children Examined—Periodic Inspections	40,034
3,090	Special Inspections	4,452
28,638	No. of Children treated	25,534
	School Nurses :—	
	<i>Cleanliness Survey.</i>	
3,080	No. of Visits to Schools	2,708
147,853	No. of Examinations of Children	118,448
1,618	No. of Homes visited for uncleanness	1,460
2,176	No. of Homes visited for "following-up" etc.	2,271
	<i>Preparation for Medical Inspection.</i>	
812	No. of Visits to Schools	924
16,584	No. of children prepared	18,343

TABLE VII. SCHOOL CLINICS.

1948		1949
<i>No. of Attendances.</i>	<i>Work.</i>	<i>No. of Attendances.</i>
59,686	Central Health Clinic .. Inspection clinic ; treatment of minor ailments : asthma clinic ; ear, nose and throat clinic ; zinc ionisation ; dental treatment ; orthodontic treatment ; refraction clinic ; X-Ray treatment of ringworm ; treatment of scabies cases ; orthopaedic clinic ; remedial exercises ; electrical treatment ; massage and foot treatment.	53,258
3,998	Brislington Clinic .. Inspection clinic ; treatment of minor ailments	6,596
863	Hotwells Treatment Centre .. Treatment of minor ailments	1,064
49,661	Bedminster Health Centre .. Inspection clinic : treatment of minor ailments : ear, nose and throat clinic ; dental treatment and refraction clinic.	41,435
7,585	South Bristol Baths Clinic .. Treatment of minor ailments	6,374
21,301	Knowle Casualty Station .. Treatment of minor ailments	23,527
1,648	Broadfield Road Clinic .. Treatment of minor ailments	7,933
39,704	Speedwell Health Centre .. Inspection clinic ; treatment of minor ailments ; ear, nose and throat clinic ; dental treatment and refraction clinic.	35,910
4,610	Verricr Road Clinic .. Treatment of minor ailments	5,026
19,153	Portway Clinic Inspection clinic ; treatment of minor ailments ; ear, nose and throat clinic ; dental treatment and refraction clinic.	20,142
32,427	Southmead Clinic .. Inspection clinic ; treatment of minor ailments ; ear, nose and throat clinic ; dental treatment, orthodontic treatment and refraction clinic.	27,876
1,354	Day E.S.N. Special Schools .. Treatment of minor ailments	2,219
19,616	Novers Open Air School .. Remedial exercises and massage ; treatment of minor ailments.	18,838
2,315	Chest Clinic Chest ailments	2,367
1,159	Cardio-rheumatic Clinic .. Cases of heart disease and acute rheumatic infection.	1,134
12,879	Artificial Light Clinic .. Cases of anaemia and debility	8,787
1,729	Child Guidance Clinic	2,023
3,213	Speech Clinics	2,558
81	Orthoptic Clinic	1,400
549	Dental Hospital	361
283,531	Total Attendances	268,828
	The number of attendances at the Central Health Clinic does not include school children who availed themselves of the facilities offered for Mass Radiography.	

